Princeton ERA: System-to-System (s2s) Proposal Development

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Last Updated March 6, 2024.

Princeton Research
Electronic Research Administration

How To Use This Manual: This manual covers Princeton ERA system-to-system (s2s) submission and provides instruction in a variety of levels of detail to cater to different users and funding opportunities. Here’s a quick overview:

• For basic S2S instructions, review the System-to-System (s2s) Instruction Overview.
• To determine if your proposal is eligible for S2S submission, review When can S2S be used?
• For more detailed information on these steps, review the following sections: Develop your proposal for S2S, SF424 Application, and SF424 Tracking and Next Steps. These provide detailed steps on general S2S submissions.
• Most examples are shown using an NIH R01, but sponsor-specific guidance is also provided for NIH, DOD, DOE, and USDA. These sections are intended to help with these specific types of applications and their unique requirements and considerations. However, these sections are not intended to be stand-alone instructions so you may need to refer to the general instructions earlier in the guide for detailed “how-to” level instruction.
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September 30, 2023 s2s update

1.1 Background
- The Princeton ERA Grants module was upgraded from version 10.1 to 10.5.2 on 9/30/2023.
- The Princeton ERA SF424 module was not upgraded, but some of the changes in the upgraded Grants module impacted the SF424 module.

1.2 New features and issues
A list of new features and issues is below. See the appropriate section of this guide for screenshots.

- Grants 10.5.2 allows budgeting by person months.
  - If budgeted by months in the FP budget, the FP budget months map to the calendar months on the SF424 PDF, truncated to 2 places past the decimal. Academic months and summer months will be blank.
  - If budgeted by summer and academic months in the FP budget, those fields map to the summer and academic months on the SF424. If only summer months is budgeted, then the academic months will map as 0, and calendar months will map as blank. You can leave the 0 in the academic months field or you can remove it from the SF424, either works.
  - If budgeted by percentage, the months maps to the calendar months on the SF424.
  - The sal req months or percentage maps to months on the SF424. In prior versions, the effort percentage mapped, but the months can be manually updated on the SF424.

- The annualized salary maps to the base salary field on the SF424 R&R Budget
  - For people with 9-month appointments, you will have to manually adjust the Base Salary field on the SF424, except for NIH proposals where the person is at or over the NIH salary cap.

- 10 budget items now map to Section F Other Direct Costs
  - Prior to this Grants upgrade, if there were more than 3 budget items that mapped to the “Other Direct Costs” section of the R&R detailed budget form, Huron would map 2 of them to this section, and then sum the remainder and map them as the third item. Now, up to 10 items will each map to items 8-17 of the Other Direct Costs section.

- Delayed Onset study form
  - A previous bug where the delayed onset study was not appearing in the PDF generated by Huron has been fixed. The Study Title, answer to the Anticipated Clinical Trial question, and Justification all appear in the PDF generated by Huron.

- Subaward OMB expiration date
  - The subaward file downloaded from the SF424 workspace has an expired OMB date, but this date is cosmetic. After the subaward file is completed and uploaded to the FP budget then synced to the SF424 via “create/update SF424” activity, the expiration date on the PDF generated in the “Generate PDF Version” activity on the SF424 workspace has an expiration date in the future.
1. Develop your funding proposal and budget and select system-to-system

- On the Funding Proposal Submission Information page Q3, indicate that the proposal is being submitted via system-to-system and enter the Opportunity ID in Q4 box to select the opportunity.
- Complete the funding proposal and budget. Some information on the proposal and budget will map to the SF424 application when it’s created. In general, proposal attachments will not map and should be uploaded directly to the SF424.

2. Create-Update SF424

- From the funding proposal workspace, click on the Create-Update SF424 activity to create the SF424 application. A pop-up window will open with all of the required forms selected. Click the checkbox next to any optional forms you would like to include. Click OK.
- When the window automatically closes, the SF424 application has been created. Navigate to the application using the SF424 link in the center of the funding proposal workspace.

3. Review and update your SF424 application

- After following the link to the SF424 workspace, click “Edit Grant Application” to review and update the SF424 application. Review each page. Some information will populate automatically based on your proposal, budget, and Princeton information stored in the system. Other information will need to be entered manually.
- If information that mapped from the funding proposal or budget needs to be updated, update the information directly on the funding proposal or budget. Then run the Create-Update SF424 activity from the funding proposal workspace so the changes map to the SF424 application. Please note that when running the Create-Update SF424 activity, you can select only the form you’d like updated or you can update all forms.
- In general, a best practice is to map and update all the information possible from the funding proposal and budget. Once that is complete, enter all of the manual information in the SF424. This will avoid entering manual information and accidentally overwriting it when running the Create-Update SF424 activity.

4. Validate Submission

- After you’ve reviewed your SF424 and consider it complete, go to the SF424 workspace and select the Validate Submission activity. Once the submission has been validated, it’s locked from further editing. This signals to your GCA the SF424 is ready for review. Click the "Reopen to Edit" activity to unlock the SF424 for additional edits.
- When you click the Validate Submission activity, a new window will open and may display an error or warning message. Errors (with a red circle) must be resolved before submission while warnings (yellow triangle) are allowed but should be reviewed. Review and resolve all errors and warnings, then re-validate the application. Once there are no issues, you will automatically be brought to the Validate Submission page. Click OK and the submission will be validated.

5. Generate PDF

- From the SF424 workspace, select Generate PDF to generate a PDF version of the application.

6. Complete all funding proposal workspace activities and submit for review

- After the SF424 application has been validated, complete any additional activities on the funding proposal workspace (such as assurances or checking COI information). Then submit the proposal for department review.
- Please note: If you are using the dual submission process, you may submit the proposal for review prior to validating the SF424. You will wait to validate the SF424 until all final science documents have been uploaded.

Does your S2S proposal have subawards? Scroll to the next page!
2.1 S2S Subaward Instruction Overview

1. **Add the Subaward Form to your SF424 Application**
   - The form can be selected when you run the Create-Update SF424 activity by checking the box next to the Research & Related Subaward Budget Attachment(s) Form. The subaward form must be selected before you can complete step 2.

2. **Download the R&R Sub Budget Form from the SF424 workspace. Send the form to your subawardee to complete.**
   - The subaward budget form should always be downloaded from the SF424 workspace. Do not download the form from Grants.Gov nor from the opportunity. Please download the form each time you create an SF424 with subs to ensure you have the right form that corresponds to the opportunity as well as the most up-to-date version of the form, otherwise there will be errors. The subawardee should complete the form, including uploading their budget justification to the form.

3. **Update the SF424 application with the number of subawards**
   - Click on the “Edit Grant Application” button to open the SF424 SmartForms. In the left navigation bar, scroll to “R&R Subaward Budget – Number of Subawards” SmartForm, click on it, and enter the number of subawards on your application. When you save, the subaward forms will be added for that number of subawards. Click save and exit the SmartForm. Do not fill in the subaward budget SmartForm.

4. **Once you have received the SF424 subaward budget form from the subawardee, validate the form**
   - When you receive the completed form from the subawardee, click on the “Check Form for Errors” button within the subaward budget form to ensure there are no errors. If there are any errors in the form, they must be corrected before proceeding. Additionally, verify the values in the form have been rounded. Cents should not be included. Also, check that the subaward dates are within or equal to the proposal dates.

5. **From the Budget workspace, click on the “Create Subaward” button to create the subaward budget**
   - On the “Subaward Budget Information” SmartForm Q5, select “SF424 Subaward Import”.

6. **Upload the R&R Subaward Budget Form to the “SF424 Subaward Import” SmartForm.**
   - Upload the form, as completed by the subawardee, on the SF424 Subaward Import page. The form should always be uploaded here, not directly attached to the SF424. This will ensure your subaward budget information can be captured on the proposal budget and the SF424. *Remember that the form uploaded MUST be the copy that was downloaded from your SF424 workspace.*

7. **If there is more than one subaward on the proposal, repeat steps 4-6 for each subaward.**

8. **Run the Create-Update SF424 activity from the Funding Proposal workspace.**
   - Select only the Subaward form and click OK. Navigate to the SF424 application to see the R&R Subaward Budget Form has populated with the sub data.
2.2 When Can S2S Be Used? When Can’t S2S Be Used?

**When can S2S be used?**

- All NIH R, F, K, DP, S opportunities
- Single project NIH T and U opportunities (R instructions)
- DOD proposals that are not pre-applications, executive summaries, abstracts or white papers
- DOE full proposals that are not required to be submitted through EERE Funding Opportunity Exchange
- USDA applications

**When can’t S2S be used?**

- All NIH P opportunities
- Multi-project NIH T and U opportunities (M instructions)
- DOD pre-applications, executive summaries, abstracts and white papers
- DOE pre-proposals or concept papers
- DOE full proposals that are required to be submitted through EERE Funding Opportunity Exchange
- Any other sponsor not mentioned in the "when can S2S be used" section such as NSF (there are too many caveats) and NASA (we submitted a NASA app via s2s and NASA told us they prefer submission via NSPIRES).

3 System-to-System (S2S) Submission Business Process

This section introduces the system-to-system proposal submission process. It introduces the SF424 module, and covers the general process, advantages, and workflow. It also includes considerations for using the dual submission approach for a S2S application.

Princeton ERA allows for the system-to-system (or S2S) submission of proposals for Grants.gov sponsors. Applications can be directly submitted from the Princeton ERA system to Grants.gov, instead of using a separate sponsor system. See the chart above for when s2s can and cannot be used. S2S submission may be expanded to include additional sponsors and opportunities in the future.

Using S2S submission allows Princeton to develop and submit the proposal all in Princeton ERA, instead of entering the proposal once in Princeton ERA and again in Grants.gov or the sponsor’s portal. This streamlines the process and reduces duplicate data entry. The use of S2S submission is not mandatory but is highly encouraged when possible.

3.1 Developing S2S Proposals – Business Process

Department administrators follow a similar proposal development process for S2S applications as for non-S2S applications. The main difference is that an SF424 application is created within the system and most attachments are uploaded within the SF424 module instead of the Funding Proposal module.
As outlined below, the funding proposal is created by completing each SmartForm page. This guide outlines the key considerations when completing the funding proposal SmartForm pages for an S2S application.

After the funding proposal has been created, the department administrator will complete the workspace activities. This includes obtaining PI assurances, adding any additional required ancillary reviews, confirming conflict of interest disclosures and training, and developing a budget (including any cost share or subaward budgets). The department admin will also add a comment to state if the proposal uses the dual submission process.

Creating the SF424 application is an additional step for S2S applications. Department administrators will use the Create-Update SF424 activity on the funding proposal workspace to create the SF424 application. Creating the SF424 will automatically map some information from the funding proposal and budgets to the application forms.
Once the SF424 has been created, department administrators will navigate to the SF424 workspace. They must open the SF424 SmartForms to review the data that has mapped from the funding proposal and budget and complete any remaining information. They will make any needed updates and additions, including uploading required research related documents.
If the department administrator is not using the dual submission process, once the SF424 has been reviewed and all information has been entered (including uploading all documents), department administrators will validate the application to ensure all required information is included and ready for submission. Once all errors have been resolved, the SF424 will be locked from further editing. The submission can be unlocked if needed using the Reopen for Edit activity. When the SF424 is Valid for Submission, add a comment to the FP to let your ORPA GCA know that it is ready for a full review. If the department administrator is not using the dual submission process, they will validate the SF424 and then submit for department review.

If the department administrator is using the dual submission process, they may submit the funding proposal for review before validating the SF424 so they can continue to upload research related documents once those documents are complete. Add a comment to the FP to let the GCA know you are using the dual submission process. When all attachments have been uploaded, validate the submission, and add a comment to let your GCA know the application is complete.

3.1.1 S2S and the dual submission process

Princeton ERA allows department administrators to submit a proposal for review using a “dual submission” process or “non dual submission” process. The “dual submission” process, as recommended by the Task Force on Administrative Workload in Research, gives department administrators the option to submit a proposal and kickoff the internal review process even though the final scientific or research elements may not be finalized.

When using the dual submission process for S2S submissions, the department administrator will complete and upload all final administrative information to the funding proposal record and budgets. They will create the SF424 record and begin reviewing for completeness and accuracy. But they will NOT validate the SF424 prior to submitting for department and ORPA review because that locks it from future editing, and the application may not successfully validate at this point because it most likely will be missing
mandatory attachments. Even if draft mandatory attachments are uploaded, the SF424 should not be validated.

The department administrator will use the Add Comment activity on the FP workspace to alert their reviewers that they are using the dual submission process. The funding proposal can then be submitted for department review. After the department reviewer approves the proposal, the proposal moves to Specialist Review and the GCA can begin reviewing the administrative components.

When the final research elements are complete, the department administrator will upload the final documents to the SF424 and validate it for submission. Then they will use the Add Comment activity on the funding proposal workspace to notify the reviewer that the application is ready for full review.

See the proposal manual for a timeline for document upload and proposal submission, as well as roles and responsibilities for the dual submission process.

### 3.2 SF424 Workflow

Similar to the funding proposal, the SF424 will go through a series of states as it progresses through creation, review, submission to Grants.gov, processing by Grants.gov, retrieval by the federal funding agency, and the assignment of the federal funding agency tracking number. Below are the SF424 states.

![SF424 Workflow Diagram]

Department administrators will create the SF424 which has the state of pre-submission. After the department administrator validates the application, it transitions to the Valid for Submission state.

From there, ORPA will submit the proposal. Grants.gov will process the application and send automatic updates back to Princeton ERA record module regarding the Grants.gov processing status.
## 4 Develop your proposal for S2S

One of the advantages of S2S submission is that it directly maps information from your funding proposal and budget to the SF424 application. This section identifies fields on each funding proposal or budget SmartForm that map to the SF424 so you can ensure you’re completing these properly when developing the proposal and budget.

The instructions in this guide are specific for S2S and are not comprehensive for the parts of the proposal that are not related to S2S, such as PI Assurances/Certification and COI information. Please see the Funding Proposal and Budget guides for more information.

## 4.1 Funding Proposal- SmartForm Pages for S2S

This section identifies funding proposal fields that will map to the SF424. It explains how they map, and any other important considerations for that field when creating a S2S application. Please note that some items listed may not be relevant depending on your application forms.

*Please note that this section is not a comprehensive list of ALL funding proposal fields, but only those that impact the SF424. For information on completing other funding proposal fields, refer to the Funding Proposal guide.*

### 4.1.1 General Proposal Information

The General Proposal Information SmartForm includes basic information about the proposal that will map to the SF424 application on the SF424 R&R cover page and R&R Senior/Key Person Profile.

<table>
<thead>
<tr>
<th>General Proposal Information SmartForm Field</th>
<th>SF424 Mapping</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Type</td>
<td>Type of Application on the SF424 R&amp;R Cover page. Can be updated on the SF424 if needed.</td>
<td></td>
</tr>
<tr>
<td>3. Long Title</td>
<td>Descriptive Title of Applicant’s Project on the SF424 R&amp;R Cover Page.</td>
<td></td>
</tr>
<tr>
<td>4. Program/Principal Investigator/Project Lead/Fellow</td>
<td>Lead PI on SF424 application, including R&amp;R cover page and R&amp;R Senior/Key Person Profile.</td>
<td>For NIH Fellowships submitted via S2S, this is the student, because NIH expects the student to map as the PI on the Senior/Key Person form.</td>
</tr>
<tr>
<td>5. Select the direct sponsor</td>
<td>Select the direct sponsor. <em>The best practice is to select the specific Institute if known at time of proposal submission. Otherwise, use “NIH – National Institutes of Health”. Note – when the proposal is received by NIH’s receipt and referral team, they will assign it to the appropriate Institute.</em></td>
<td></td>
</tr>
<tr>
<td>8. Expected Start Date</td>
<td>Proposed Project Start Date on the SF424 R&amp;R Cover Page.</td>
<td>Selecting a federal sponsor is required in order to be able to search for funding opportunities on the Submission Information SmartForm page.</td>
</tr>
</tbody>
</table>
4.1.2 Personnel

The Personnel page includes information about internal and external project personnel. Senior/Key personnel or Other Significant Contributors listed on this page will map to the R&R Senior/Key Personnel Form.

<table>
<thead>
<tr>
<th>Personnel SmartForm Field</th>
<th>SF424 Mapping</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Program Director/ Principal Investigator/Project Lead/Fellow</td>
<td>PI on SF424 application, including R&amp;R Senior/Key Person Profile.</td>
<td>For NIH s2s fellowships, the fellow will be listed as the PI. Their mentor (faculty member) should be listed in 1a, but also must be added to the SF424 R&amp;R Senior/Key Person form with the role type of “Other (Specify)” and “Sponsor”</td>
</tr>
<tr>
<td>1b. Biosketch</td>
<td>Maps to Biosketch for the PI on the R&amp;R Senior/Key Person Profile.</td>
<td>Biosketches should be uploaded for S2S proposals if required at time of submission.</td>
</tr>
<tr>
<td>1c. Other Support</td>
<td>Maps to Current &amp; Pending Support for the PI on the R&amp;R Senior/Key Person Profile.</td>
<td>Current &amp; Pending report should be uploaded for S2S proposals if required at time of submission.</td>
</tr>
<tr>
<td>2. Responsible Department</td>
<td>Maps to Department on SF424 R&amp;R Cover page and on the R&amp;R Senior/Key Person Profile for the PI.</td>
<td></td>
</tr>
<tr>
<td>3. Project Personnel</td>
<td>All personnel in 3a or 3b that are marked as Senior Key Personnel or Other Significant Contributor will map to the R&amp;R Senior/Key Person Profile. People marked as “Other Personnel” will not map to the SF424.</td>
<td></td>
</tr>
<tr>
<td>3a. Institutional Personnel</td>
<td>Name, Project Role, Biosketch, Current &amp; Pending, and Key designation will map to the R&amp;R Senior/Key Person Profile.</td>
<td>When internal personnel are selected, information from their Princeton ERA Contact Profile in the system will also map to the Senior/Key Person Profile—including their position, title, dept, address, contact information. For NIH applications, their ERA Commons ID will also map if the ERA Team is notified by filing a ticket with <a href="mailto:erasupport@princeton.edu">erasupport@princeton.edu</a>. The ERA Team can add the person’s Commons ID to the person’s Princeton ERA Person Contact Profile so that it always maps to the Senior/Key Person form.</td>
</tr>
<tr>
<td>3b. Non-institutional Personnel</td>
<td>Any information provided will be mapped to the R&amp;R Senior/Key Personnel Profile. This includes: Prefix, Name, Suffix, Position/Title, Organization, Department, Division, Address, contact information, Credentials, Project Role, Key</td>
<td>Ensure Biosketch, Current &amp; Pending (if required at time of submission), and, for NIH applications, their ERA Commons ID are entered.</td>
</tr>
</tbody>
</table>
It is important to ensure personnel are entered with the proper role and personnel designation (such as Senior/Key, Other Significant Contributors, or Other) for s2s proposals. This information will appear on the SF424 application and affects who appears on the R&R Senior/Key Personnel Profile.

Always select the appropriate roles based on the funding source you are proposing for. Contact your GCA if you are unsure on which role to select.

<table>
<thead>
<tr>
<th>Project Role</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-Investigator</td>
<td>Use for co-investigators on NIH or NASA proposals, as appropriate.</td>
</tr>
<tr>
<td>Consultant</td>
<td>Do not use.</td>
</tr>
<tr>
<td>Co-PD/PI</td>
<td>Use for Co-PIs.</td>
</tr>
<tr>
<td>Faculty</td>
<td>Use if appropriate. May be used for contributor that is not being named in another Project Role.</td>
</tr>
<tr>
<td>Graduate Student</td>
<td>Use only if the graduate student is named on the proposal.</td>
</tr>
<tr>
<td>Other Professional</td>
<td>Should be used for DOF-appointed individuals that do not fit into another Project Role.</td>
</tr>
<tr>
<td>Post Doctoral</td>
<td>Use general Post Doctoral role for all post docs.</td>
</tr>
<tr>
<td>Post Doctoral Associate</td>
<td>Do not use.</td>
</tr>
<tr>
<td>Post Doctoral Scholar</td>
<td>Do not use.</td>
</tr>
<tr>
<td>Technician</td>
<td>Use for technicians.</td>
</tr>
<tr>
<td>Undergraduate Student</td>
<td>Use only if the undergraduate student is named on proposal.</td>
</tr>
<tr>
<td>Secretarial/Clerical</td>
<td>Use for administrative personnel such as program managers, program coordinators, application specialists.</td>
</tr>
<tr>
<td>PD/PI</td>
<td>Use for multi-PI awards, such as for NIH where Co-PI designation is not used. Should be used for all other PI’s not listed on Personnel question 1.</td>
</tr>
<tr>
<td>Other (Specify)</td>
<td>Non-S2S proposals that are not NIH Fellowships: Do not use.</td>
</tr>
<tr>
<td></td>
<td>Non-S2S proposals that are NIH Fellowships with one Sponsor: Do not use.</td>
</tr>
<tr>
<td></td>
<td><strong>Non-S2S proposals that are NIH Fellowships with Co-sponsors:</strong> Enter each co-sponsor as “Other (Specify)” and type “Co-sponsor” in the “Enter the Role” box. “Senior/key personnel” should be selected for each Co-Sponsor.</td>
</tr>
<tr>
<td>S2S NIH Fellowship Proposals with one Sponsor:</td>
<td>• The sponsor (faculty mentor) in Personnel Q1a will appear on the “Display Team COI Information” activity but will not map to the SF424 Sr/Key Person form.</td>
</tr>
<tr>
<td></td>
<td>• The sponsor (faculty mentor) can either be manually added to the SF424 Sr/Key Person form or the faculty mentor can be added to both Personnel 1a and 3a. In 3a, select “Other (Specify)”, type “Sponsor” in the “Enter the role” box, and select “Senior/key personnel”; the faculty member in 3a will then map to the SF424 Sr/Key Person form.</td>
</tr>
<tr>
<td>S2S NIH Fellowship Proposals with Co-sponsors:</td>
<td>• Manually add each co-Sponsor to 3a as “Other (Specify)” and type “Co-sponsor” in the “Enter the Role” box. “Senior/key personnel” should be selected for each Co-Sponsor.</td>
</tr>
</tbody>
</table>
• The Co-sponsors will then appear on the “Display Team COI Information” activity and they will also map to the SF424 Senior/Key Person form.

Refer to the following guidance when determining what type of personnel an individual is:

- **Senior/Key Personnel**: As determined by the RFP and sponsor guidance
- **Other Significant Contributor**: An NIH term referring to individuals who have committed to contribute to the scientific development or execution of a project but are not committing measurable effort to the project.
- **Other Personnel**: Additional personnel on the project who are not key. May include graduate students, secretarial/clerical, other professionals, etc. Personnel marked as “Other Personnel” will not map to the SF424.

### 4.1.3 Submission Information

The Submission Information page is used to denote that s2s submission will be used and direct you to select the funding opportunity.

Confirm the submission type is Federal and that your Direct Sponsor appears.

Click Yes that the application will be s2s. When yes is selected, the search box for funding opportunity announcements will be displayed.

To search for your funding opportunity, enter the Package ID, Opportunity ID, CFDA number, or Competition ID. Click the "Find" button to search. Searching by Opportunity ID is the most common way to easily find your opportunity.

Grants.Gov will display the matching opportunities, their requirements, and forms.
Click the radio button to select the desired opportunity.

Once an opportunity is selected, click continue to move to the next SmartForm page. For S2S submissions, a SmartForm page called Funding Opportunity Announcement will appear next.

4.1.4 Funding Opportunity Announcement
This Funding Opportunity Announcement SmartForm page will only appear for s2s submissions where the opportunity has been selected on the Submission Information SmartForm page. The page provides additional details about the FOA and system support for submission.
Review the funding opportunity information including required forms, optional forms, and instructions. A message will confirm if the forms are fully supported and this application can be submitted to Grants.gov.

Note: If the Funding Opportunity Announcement SmartForm page displays a message that the “Some of the required forms are not supported. Submission would not occur electronically” but all required forms and any optional forms you want to include display as “yes” in the “supported” column, return to the Submission Information SmartForm and click on the “Refresh Forms Support” button. Then navigate back to this SmartForm page and the error message should be cleared. If the error message is not cleared, contact erasupport@princeton.edu.

Note: If an optional form is not supported and you were not going to submit that form anyway, you may still proceed with S2S submission. However, if a mandatory form is not supported, or if an optional form you need to submit is not supported, then the application may not be submitted S2S.

### 4.1.5 Budget Periods and Key Dates

The Budget Periods and Key Dates page contains information about the project start and end dates which will map to the R&R Cover page. Decisions on this field also inform how the funding proposal budget is created. The budget can also map to the SF424 application if desired.

<table>
<thead>
<tr>
<th>Budget Period and Key Dates SmartForm Field</th>
<th>SF424 Mapping</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Date Project Starts</td>
<td>Proposed Project Start Date on the SF424 R&amp;R Cover Page.</td>
<td></td>
</tr>
<tr>
<td>4. Date Project Ends</td>
<td>Proposed Project End Date on the SF424 R&amp;R Cover Page.</td>
<td></td>
</tr>
</tbody>
</table>
7. Modular Budget
Does not directly map but allows you to set up a modular budget for the proposal which will account for modular offsets. The Modular Budget forms should be selected when executing Create-Update SF424.

8. Budget Periods
Does not directly map but establishes the budget periods used for creating your budget. Budget can be mapped to the R&R budget or modular budget forms.

4.1.6 Compliance Review
The Compliance Review SmartForm page contains compliance related questions regarding human subjects, animals, and stem cells that will map to the SF424 application.

<table>
<thead>
<tr>
<th>Compliance Review SmartForm Field</th>
<th>SF424 Mapping</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Involves human subjects?</td>
<td>Maps yes or no to human subjects question on the R&amp;R Other Project Information page.</td>
<td>Note that Princeton’s human subject assurances number will automatically appear on the R&amp;R Other Project Information page if this is yes.</td>
</tr>
<tr>
<td>1b. IRB Protocol Submitted?</td>
<td>If no is selected, the IRB review will be marked as pending on the R&amp;R Other Project Information page. If yes is selected, the information from 1C will be used for mapping to the SF424.</td>
<td></td>
</tr>
<tr>
<td>1C. IRB Protocols</td>
<td>If all protocols listed have an Exemption # listed, the project will be marked as exempt from federal regulations. All applicable exemption numbers will map. If some protocols are exempt but not all, it will map as not exempt. If any protocol is listed as Pending, it will map that the IRB Review is Pending. If all protocols listed are marked as approved, it will map that the IRB review is not pending. If all protocols are listed are approved (none are pending), the IRB approval date will be listed as the most recent protocol approval date.</td>
<td></td>
</tr>
<tr>
<td>2. Live, Vertebrate animals used?</td>
<td>Maps yes or no to the vertebrate animals question on the R&amp;R Other Project Information page.</td>
<td>Note that Princeton’s animal welfare assurance number will automatically appear on the R&amp;R Other Project Information page if this is yes.</td>
</tr>
<tr>
<td>2a. IACUC Protocol Submitted?</td>
<td>If no is selected, the IACUC review will be marked as pending on the R&amp;R Other Project Information page. If yes is selected, protocol information from 2B will be used for mapping.</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>SF424 Mapping</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 1. Application Institution    | The Trustees of Princeton is the applicant institution on the SF424 R&R Cover Page and the Project/Performance Site Primary Location on the Project/Performance Site Locations form.  

*This field will also cause additional institutional information to default on the SF424 application, including applicant institution details, contact information, and the authorized representative.* | Trustees of Princeton should always be selected. This will default and should not be edited. |
| 2. Program Income             | Maps to the SF424 R&R Cover Page estimated project funding and the PHS 398 Cover Page Supplement. Program income details provided (budget period number, source of funding, and amount) will map too if provided. | |

### 4.2 Budgets - SmartForm pages for S2S

This section describes how to develop budgets for S2S submission. It explains how budgets map and additional special considerations. Project budgets (also known as sponsor budgets), subaward budgets, and cost share budgets will be covered. *Please note that the Budgets Guide may also serve as a helpful resource for budget development.*

There are two budget forms:

- The R&R Budget form, which is the detailed budget form.
- The PHS 398 Modular Budget form, which is only used for certain NIH opportunities. If this is an NIH modular budget, it’s important to confirm on the [Budget Periods and Key Dates page](#) of the funding proposal SmartForm that yes is selected for the Modular Budget Question.
4.2.1 Project Budgets
When the funding proposal is created, the system automatically creates a project budget with the name of the primary sponsor. This budget should be completed as part of the proposal development process. This type of budget is called a sponsor budget or project budget. Even if your NIH opportunity requires use of the modular budget form, a detailed budget must be entered in Princeton ERA.

Multiple project budgets may be created using the Create Additional Budget activities for various scenarios such as different F&A rates, different PIs, or different departments. If multiple project budgets are created (and marked as Include in Consolidate Budgets = Yes), they will all map to the SF424 budget forms with their appropriate rates and values applied.

4.2.2 General Budget Information
Information selected on this page will define how the budget is built and affect budget values such as Indirect Costs and the inflation applied to budget items.

- **F&A Cost base and rates** selected will appear on the R&R budget form in Section H – Indirect Costs or the PHS 398 Modular Budget – Box B. These values will be used to calculate the F&A base amount and funds request for each period. Ensure the proper base and rate is selected. **Please note that if you are proposing an F&A rate less than Princeton’s federally negotiated rate, the waived or reduced F&A rate must be approved using an ancillary review to the ORPA Director (for waivers or unpublished reduced rates) or your ORPA GCA (for reduced but published rates).**

```
<table>
<thead>
<tr>
<th>Period</th>
<th>Start:</th>
<th>10/12/2020</th>
<th>10/12/2021</th>
<th>10/12/2022</th>
<th>10/12/2023</th>
<th>10/12/2024</th>
<th>10/12/2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;A Cost Base</td>
<td>Rate:</td>
<td>62%</td>
<td>62%</td>
<td>62%</td>
<td>62%</td>
<td>62%</td>
<td>62%</td>
</tr>
<tr>
<td>MTDC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

- If the budget is marked as **Include in Consolidated Budgets**, it will map to the SF424. If No is selected, it will not map. Project budgets should typically be marked as Yes unless they were created as a draft budget. **Note if additional budgets are created as “drafts” to test various scenarios (e.g. budgeting 2 post-docs versus 3 post-docs), it’s important to ensure the draft budget is marked as In Consolidated Budgets = No so those drafts do not map to the SF424.**

- **Salary cap** will default for all NIH sponsors with a “monthly salary cap” that displays as the salary cap divided by 12. The salary cap and monthly salary cap fields should be left blank for other sponsors.
Appropriate **inflation rates** should be used for Personnel and General (non-personnel) Costs as they will affect the budget values.

### 4.2.3 Personnel Cost Definition & Personnel Costs

All Princeton personnel included in the budget will be listed on the Personnel Cost Definition page and then budgeted on the Personnel Cost page using their effort, salary requested, benefits rate, and base salary.

For R&R budgets, each person’s name, role, base salary, sal requested months, sal requested salary, and fringe benefits will map to the R&R Budget – Sections A Senior/Key Personnel or to Section B Other Personnel. For other personnel (such as grad students or post docs), the number of individuals listed on the budget will map. If the person is budgeted using summer and academic months, those months will map to the summer and academic months fields on the SF424 as appropriate; else the months will map as calendar months.

For modular budgets, personnel costs are summed with the general cost types for Total Direct Costs in Box A.

**Personnel Cost Definitions**

*Please note the Personnel should always be budgeted “by person” using the Personnel Cost Definition and Personnel Costs Page. Please do not budget Personnel as “Total Direct Costs” or “Other”, even when permitted by the Sponsor. Personnel effort maps from the Princeton ERA proposal budget to the Pending section of the Current and Pending Support.*

#### 3. Appointment

- Defaults to 12 months. Leave this as 12-months, even for 9-month faculty:
  - As of the 9/30/2023 version 10.5.2 upgrade, for new proposals created from scratch where the “import proposal personnel” button is used on the Personnel Cost Definition screen, the appointment defaults as 12 and should stay as 12, even if the person has a 9-month appointment. The appointment must be 12 months so that the person months effort appears correctly on the pending section of the c+p report.
  - For personnel who are added to the budget as “staff member to be determined” (not imported), the appointment defaults as blank.
4. **Budget summer and academic effort separately**: if the Effort Metric question on the Budget Period and Key Persons SmartForm is set to “months”, then this question appears.
   a. The default is “no”, which is budgeting by calendar months.
   b. Change this answer to “yes” to budget by summer and academic months.
   c. Why would you want to budget by calendar months vs academic and summer months?
      i. If you have been tracking researcher effort in terms of calendar months, then select no.
      ii. If you have been tracking researcher effort in terms of academic and summer months, then select yes.
      iii. If you are submitting via s2s, these months will map to the calendar or academic and summer months fields on the SF424 detailed budget form, as entered in Princeton ERA, truncated to 2 places past the decimal.

5. **Annualized Salary**: Enter the person’s annualized salary (monthly salary times 12). If this is an NIH proposal and the person’s salary exceeds the salary cap, enter the NIH salary cap.
   a. Example: a PI has a 9-month salary of $90K. Enter the person’s monthly salary times 12 in the “annualized salary” box.
      i. Formula to calculate annualized salary:
         1. (Person’s salary / number of months in that salary) times 12.
         2. $90K/9 = $10K a month.
         3. $10K times 12 = $120K annualized salary.
   b. If the proposal is NIH and the person is at or over the cap, you’ll enter the current NIH salary cap in the field. The NIH salary cap is a 12-month value.

6. **Apply inflation rate**: Defaults to yes. Update if needed.
   2. Selecting No will allow you to manually update the base salary for each year on the Personnel Cost screen, if needed.
      o Inflation should be set to No for NIH proposals where you are budgeting at or close to the salary cap. Otherwise cost sharing will be automatically generated by the system.
      o If you are budgeting more faculty than grad students: Leave inflation as yes for faculty. For grad students (where inflation is typically 3% instead of the default 4%), you should select no so you can inflate the base by 1.03 for each out year.
      o If you are budgeting more grad students than faculty: Leave inflation as yes for grad students. For faculty, select no so you can inflate the base by 1.04 for each out year.
Non-NIH, or NIH and researcher is under the NIH salary cap:

Example: Person has 9-month appt. Their 9-month salary is $90K.

Q3. Keep the appointment field as 12-months, even if the person has a 9-month appointment.

Q4. Defaults to "no" to budget by calendar months. You can change to "yes" if you want to budget by summer and academic months.

Q5. Enter the person’s annualized salary:

\[
\text{\$90K/9 = \$10K a month} \\
\text{\$10K x 12 = \$120K}
\]

Q6. If you want the Annualized Salary to inflate by the % on the General Budget Information page, select Yes for "Apply Inflation Rate". You will not be able to change the Annualized salary in the out years. Select "No" and the Annualized Salary will not inflate in the out years, but you can change the Annualized Salary in the out years.
Note: The annualized salary displayed above was the NIH salary cap at the time the screenshot was taken. Use the current NIH salary cap for your NIH proposal budget.

On the Personnel Costs page, personnel can be budgeted using the standard method described in-depth in the Budget Manual. For detailed questions, refer to the budget manual. The information below is the process and key considerations to keep in mind for S2S applications.

**Budgeting Salary**

- If you need help annualizing the salary, the “Calculate Annualized Salary” tab of the Effort Tool in the “Tools” tile of the Princeton ERA home page can help.
- If you know the amount you want to budget but not the number of corresponding months, the “Calculate PM using Salary Cost” tab of the Effort Tool in the “Tools” tile of the Princeton ERA home page can help.
- You may need to enter at least 4 places past the decimal to get Huron to calculate the exact amount that you want to budget.

**4.2.4 Budget Salary by summer and academic months, non-NIH**

- If the Budget Period and Key Dates SmartForm Q6 for Effort Metric is months, and the Personnel Cost Definition Q4 “budget summer and academic effort separately” is:
  - No: then the fields for the number of calendar months for effort and sal req appear on the Personnel Costs screen.
- Yes: then the fields for the number of summer (SM) and academic (AY) months for effort and sal req appear on the Personnel Costs screen.

- If personnel inflation was applied, the annualized salary is display-only. If personnel inflation is not applied, the annualized salary is editable.

- The monthly rate is a display-only value. It displays the value in the Annualized Salary field divided by 12.

**Budget by summer and AY months was set to yes, so there are budget rows for SM and AY.**

**Inflation set to yes. The Annualized Salary inflates, but is not editable.**

**Inflation set to no. The Annualized Salary does not inflate, but it is editable.**

<table>
<thead>
<tr>
<th>Period:</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start:</td>
<td>7/1/2024</td>
<td>7/1/2025</td>
<td>7/1/2026</td>
</tr>
<tr>
<td>End:</td>
<td>6/30/2025</td>
<td>6/30/2026</td>
<td>6/30/2027</td>
</tr>
<tr>
<td>Duration:</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
</tr>
</tbody>
</table>

- **SM Effort Mos.:**
  - Period 1: 0
  - Period 2: 0
  - Period 3: 0

- **SM Sal Req Mos.:**
  - Period 1: 0
  - Period 2: 0
  - Period 3: 0

- **AY Effort Mos.:**
  - Period 1: 0
  - Period 2: 0
  - Period 3: 0

- **AY Sal Req Mos.:**
  - Period 1: 0
  - Period 2: 0
  - Period 3: 0

- **FB Rate:**
  - Period 1: 37.3%
  - Period 2: 37.3%
  - Period 3: 37.3%

- **Annualized Sal.:**
  - Period 1: $120,000.00
  - Period 2: $124,800.00
  - Period 3: $129,792.00

- **Monthly Rate:**
  - Period 1: $10,000.00
  - Period 2: $10,400.00
  - Period 3: $10,816.00

- **Salary Cost Total:**
  - Period 1: $0.00
  - Period 2: $0.00
  - Period 3: $0.00

- **Benefits Cost Total:**
  - Period 1: $0.00
  - Period 2: $0.00
  - Period 3: $0.00

- **Personnel Cost Total:**
  - Period 1: $0.00
  - Period 2: $0.00
  - Period 3: $0.00
Note: Benefits need to be removed for grad students and undergraduates; scroll to the fringe benefits section for instructions.
## 4.2.5 Budget Salary by summer and academic months, NIH example:

### Personnel Costs

<table>
<thead>
<tr>
<th>Period</th>
<th>Start</th>
<th>End</th>
<th>Budget Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Period 1</td>
<td>1/1/2024</td>
<td>6/30/2024</td>
<td>$82,926.00</td>
</tr>
<tr>
<td>Period 2</td>
<td>7/1/2025</td>
<td>6/30/2026</td>
<td>$85,554.00</td>
</tr>
<tr>
<td>Period 3</td>
<td>7/1/2026</td>
<td>6/30/2027</td>
<td>$88,263.00</td>
</tr>
</tbody>
</table>

### Budget Salary by summer and academic months, NIH example:

<table>
<thead>
<tr>
<th>Person: Martha Gibbs (testpi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role: PD/PI</td>
</tr>
<tr>
<td>Role: Staff Member To Be Determined</td>
</tr>
<tr>
<td>Role: Graduate Student</td>
</tr>
</tbody>
</table>

**Budget by summer and AY months was set to yes, so there are budget rows for SM and AY.**

**Inflation set to No. NIH Salary Cap is used.**

### NIH proposal, researcher at or over NIH salary cap

<table>
<thead>
<tr>
<th>Period</th>
<th>Start</th>
<th>End</th>
<th>Budget Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Period 1</td>
<td>1/1/2024</td>
<td>6/30/2024</td>
<td>$82,926.00</td>
</tr>
<tr>
<td>Period 2</td>
<td>7/1/2025</td>
<td>6/30/2026</td>
<td>$85,554.00</td>
</tr>
<tr>
<td>Period 3</td>
<td>7/1/2026</td>
<td>6/30/2027</td>
<td>$88,263.00</td>
</tr>
</tbody>
</table>

### Effort Months

- **Sal Req Months**
- **Effort %**
- **Sal Req %**
- **Benefit Rate %**
- **Annualized Salary**
- **Monthly Rate**

After pressing "Show Effort", these values are displayed: **Effort Months**, **Sal Req Months**, **Effort %**, **Sal Req %**, **Benefit Rate %**, **Annualized Salary**, **Monthly Rate**

**Duration is the number of months in the budget period.**

**% effort is the number of months budgeted divided by the number of months in the budget period (not the number of months in the appointment type).**

Feel free to ignore %.

**Monthly Rate is the Annualized Salary entered in the Personnel Cost screen divided by 12.**

### Notes:
- Budget by summer and AY months was set to yes, so there are budget rows for SM and AY.
- Inflation set to No. NIH Salary Cap is used.

### Salary Details:

<table>
<thead>
<tr>
<th>Role</th>
<th>SM Effort Mos.</th>
<th>SM Sal Req Mos.</th>
<th>AY Effort Mos.</th>
<th>AY Sal Req Mos.</th>
<th>FB Rate</th>
<th>Annualized Sal.</th>
<th>Monthly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD/PI</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>8.333%</td>
<td>$120,000.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>PI</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8.333%</td>
<td>$120,000.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Staff Member To Be Determined</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8.333%</td>
<td>$120,000.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Graduate Student</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8.333%</td>
<td>$120,000.00</td>
<td>$10,000.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FB Rate</th>
<th>Annualized Sal.</th>
<th>Monthly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.3%</td>
<td>$212,100.00</td>
<td>$17,675.00</td>
</tr>
<tr>
<td>37.3%</td>
<td>$212,100.00</td>
<td>$17,675.00</td>
</tr>
<tr>
<td>37.3%</td>
<td>$212,100.00</td>
<td>$17,675.00</td>
</tr>
</tbody>
</table>
Personnel Costs

Person: Martha Gibbs (testpi8)  Role: PD/PI

<table>
<thead>
<tr>
<th>Period</th>
<th>Start</th>
<th>End</th>
<th>Duration</th>
<th>SM Effort Mos.</th>
<th>SM Sal Req Mos.</th>
<th>AY Effort Mos.</th>
<th>AY Sal Req Mos.</th>
<th>FB Rate</th>
<th>Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7/1/2024</td>
<td>6/30/2025</td>
<td>12.00</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>37.3 %</td>
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<tr>
<td></td>
<td>7/1/2025</td>
<td>6/30/2026</td>
<td>12.00</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>37.3 %</td>
<td>$212,100.00</td>
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<tr>
<td></td>
<td>7/1/2026</td>
<td>6/30/2027</td>
<td>12.00</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>37.3 %</td>
<td>$212,100.00</td>
</tr>
</tbody>
</table>

Salary Cost Total: $0.00  Benefits Cost Total: $0.00  Personnel Cost Total: $0.00

Use the arrow to copy the value forward to the out years

I filled in 1 summer month of effort and sal requested for the PI.

I still have to press Save for the totals to calculate.

Budget Summary

<table>
<thead>
<tr>
<th>Period</th>
<th>Start</th>
<th>End</th>
<th>Duration</th>
<th>Personnel Total</th>
<th>Direct Total</th>
<th>Indirect Total</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7/1/2024</td>
<td>6/30/2025</td>
<td>12.00</td>
<td>$24,268.00</td>
<td>$24,268.00</td>
<td>$15,932.00</td>
<td>$39,800.00</td>
</tr>
<tr>
<td></td>
<td>7/1/2025</td>
<td>6/30/2026</td>
<td>12.00</td>
<td>$24,268.00</td>
<td>$24,268.00</td>
<td>$15,932.00</td>
<td>$39,800.00</td>
</tr>
<tr>
<td></td>
<td>7/1/2026</td>
<td>6/30/2027</td>
<td>12.00</td>
<td>$24,268.00</td>
<td>$24,268.00</td>
<td>$15,932.00</td>
<td>$39,800.00</td>
</tr>
</tbody>
</table>

Budget Totals: $72,800.00

Personnel Costs

<table>
<thead>
<tr>
<th>Period</th>
<th>Start</th>
<th>End</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7/1/2024</td>
<td>6/30/2025</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>7/1/2025</td>
<td>6/30/2026</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>7/1/2026</td>
<td>6/30/2027</td>
<td>12.00</td>
</tr>
</tbody>
</table>

Person: Martha Gibbs (testpi8)  Role: PD/PI

<table>
<thead>
<tr>
<th>Period</th>
<th>Salary</th>
<th>Benefits</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$17,675.00</td>
<td>$6,593.00</td>
<td>$24,268.00</td>
</tr>
<tr>
<td></td>
<td>$17,675.00</td>
<td>$6,593.00</td>
<td>$24,268.00</td>
</tr>
<tr>
<td></td>
<td>$17,675.00</td>
<td>$6,593.00</td>
<td>$24,268.00</td>
</tr>
</tbody>
</table>

After pressing Save, the page refreshes to display totals.
Click "Edit" to edit the values.
Click "Show Effort" to view the effort in months and percentage.
### 4.2.6 Budget Salary by calendar months

#### Personnel Costs

<table>
<thead>
<tr>
<th>Period</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>7/1/2024</td>
<td>7/1/2025</td>
<td>7/1/2026</td>
</tr>
<tr>
<td>End</td>
<td>6/30/2025</td>
<td>6/30/2026</td>
<td>6/30/2027</td>
</tr>
<tr>
<td>Duration</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
</tr>
<tr>
<td>SM Effort Mos.:</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>SM Sal Req Mos.:</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AV Effort Mos.:</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>AV Sal Req Mos.:</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Effort %</td>
<td>8.3333%</td>
<td>8.3333%</td>
<td>8.3333%</td>
</tr>
<tr>
<td>Sal Req %</td>
<td>8.3333%</td>
<td>8.3333%</td>
<td>8.3333%</td>
</tr>
<tr>
<td>FB Rate:</td>
<td>37.3 %</td>
<td>37.3 %</td>
<td>37.3 %</td>
</tr>
<tr>
<td>Annualized Sal.:</td>
<td>$120,000.00</td>
<td>$124,800.00</td>
<td>$129,792.00</td>
</tr>
<tr>
<td>Monthly Rate:</td>
<td>$10,000.00</td>
<td>$10,400.00</td>
<td>$10,816.00</td>
</tr>
<tr>
<td>Salary Cost Total:</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Benefits Cost Total:</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Personnel Cost Total:</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Budget by summer and AY months was set to no, so the rows are for "months" meaning calendar months.

Inflation set to Yes. The Annualized Salary inflates.

I filled in 1 month of effort and sal requested for the PI.

I still have to press Save for the totals to calculate.

Use the arrow to push the value forward to the out years.

After pressing "Show Effort", these values are displayed:
- Effort Months
- Sal Req Months
- Effort %
- Sal Req %
- Benefit Rate %
- Annualized Salary
- Monthly Rate

Duration is the number of months in the budget period.

% effort is the number of months budgeted divided by the number of months in the budget period (not the number of months in the appointment type).

Monthly rate is the Annualized Salary entered in the Personnel Cost screen divided by 12.
4.2.7 Budgeting Benefits

- Fringe benefits default for all personnel in all budget years based on the provisional fringe rate. If the budget period spans the current fiscal year and next fiscal year, and the current and provisional rates are different, then the FB Rate should be updated with a blended FB Rate. **Please use the Princeton ERA-Blended Fringe Rate Tool, available on the ORPA website, to calculate the blended rate for the first period.** The tool will calculate the blended rate based on the number of months and days in each fiscal year.

- The FB Rate must also be updated for personnel, such as graduate students, who do not receive benefits. The FB provisional rate should be removed and updated to 0%.
4.2.8 General Cost Definition & General Costs

The general cost types selected and their per period values will map to the R&R Budget by period and the R&R Budget- Cumulative. General cost types will map to the proper section of the form based on either type.

- Equipment Cost Types (cost and description) will map to “Section C- Equipment Description.”
- Travel Costs (domestic and foreign) will map to “Section D- Travel.”
- Participant Trainee Costs (including tuition, stipends, travel, subsistence) will map to “Section E – Participant Trainee Support Costs.”
- Other Direct Costs (including Materials and Supplies, Consultant Services, Subawards, Equipment or Facilities Rental/User Fees, and Others) will map to “Section F – Other Direct Costs.”

For modular budgets, all direct costs (including general cost types and personnel costs) are summed in Box A for each period of the form.

4.2.9 Attachments

The Budget Justification must be uploaded directly to the SF424 instead of the Attachment page of the budget SmartForm. The document can be uploaded on the R&R Budget – Period 1 – Section K or PHS-398 Modular Budget – Cumulative section. The document will not map from the project budget SmartForm to the SF424, so if it is uploaded here it will still need to be uploaded again directly on the SF424 as required.

4.3 Subaward Budgets

Subaward budgets are created from the project budgets using the Create Subaward button. An individual subaward budget must be created for each subawardee.
4.3.1 Subaward Budget Information

Information selected on the Subaward Budget Information page will define how the budget is built and affect budget values. There are a few key considerations for setting up the subaward budget for S2S submission.

1. The **SF424 Subaward Import** method should be chosen for S2S submissions. The subawardee’s budget totals are imported to the system using their completed R&R subaward Budget PDF Form. The system can then directly map this budget to the R&R Subaward Budget Attachments on the SF424.

2. **Include in consolidated budgets** should always be yes (unless its parent project budget is not be included because it’s a draft). Selecting yes means this will be included in our budget totals.

3. For budgets using the MTDC cost base, the system displays the **Subaward Indirect Contribution Limit**. It automatically defaults to $25,000, representing that only the first 25K of the subaward will be used in calculating Indirects for the project budget. Update if necessary.

*Note: This question only displays if MTDC was selected as the cost base on the sponsor budget that this subaward was created on.*
4.3.2 SF424 Subaward Import

This SmartForm page will only appear if, on the Subaward Budget Information SmartForm, “SF424 Subaward Import” is selected for the budget detail level. This option must be selected when submitting the proposal system-to-system.

The R&R Subaward Budget PDF must be completed and returned by the subawardee for uploading. The editable PDF version of the form must be downloaded from the SF424 workspace within Princeton ERA and sent to the subawardee, as opposed to the version available on the Grants.gov website, otherwise the upload won’t work.

Note: It is recommended to get this file from the subawardee as soon as possible to ensure the file is valid and allow time for the subawardee to correct any invalid files or budget errors.

New Proposal Example

Note: The subaward file downloaded from the SF424 workspace has an expired OMB date, but this date is cosmetic. After the subaward file is completed and uploaded to the FP budget then synced to the SF424 via “create/update SF424” activity, the expiration date on the PDF generated in the "Generate PDF Version" activity on the SF424 workspace has an expiration date in the future.
When the completed file is received from the subawardee, return to the SF424 Subaward Import page within the subaward budget SmartForms to update the file. Drag & drop the file over the box or select Choose File to select the file from your desktop.

Click Save or Continue. The form has been imported and you can confirm the totals by reviewing the Financial tab on the Subaward Budget Workspace.
If there is an issue with the Subaward R&R budget form, you will receive an error message when importing, “Could not update the Budget due to one or more errors”. Ensure the editable PDF version of the form is downloaded from the SF424 workspace within Princeton ERA and completed correctly. The most common error is that the period dates entered in the Subaward R&R Budget PDF form do not match or do not fall within the budget periods of the main sponsor budget. Correct any errors on the form and retry the import.

4.3.3 Attachments

No attachments will propagate from the subaward budget SmartForm to the SF424. However, your required subaward documentation should be provided here.

Upload the Subrecipient Statement of Collaborative Intent form and all associated attachments, following the naming conventions in the Subaward Documents Naming Conventions guide.

Drag and drop a file or select the Add button to choose a file.

If needed, click the ellipsis to upload a revision.

For all subawards:

Subrecipient/Contractor Classification form and Subrecipient Statement of Collaborative Intent (Commitment form) including statement of work with deliverables, budget and budget justification including F & A documentation, Financial Status Questionnaire with attachments (see form for applicability), Sole Source Justification (for contracts only) should be uploaded and labeled appropriately. See the Subaward Documents Naming Conventions guide. Note that the subawardee may have included their budget justification within the R&R documents.

For fixed price subawards:
Justification statement for fixed price subawards must be included in the prime award budget justification; verification of UEI and SAM.gov registrations as well as above referenced info must be included too. All are uploaded in the Subaward Attachments tab and labeled appropriately.

Refer to the ORPA website for details on the subaward document naming convention.

### 4.3.4 Additional Subaward Mapping Details

Using the SF424 Subaward Import Method directly maps the subaward information from the subawardee to the R&R Subaward Budget Attachment in the SF424 application. The subaward costs will also be included in the R&R Budget or PHS398 Modular Budget.

- For R&R budgets, the subaward direct and indirect costs will be included in the R&R Budget – Section F Other Direct Costs as “Subawards/Consortium/Contractual Costs” for each period and on the R&R Budget – Cumulative.
- For NIH modular budgets, the subaward costs will be included in the PHS398 Modular Budget Form – Direct Costs Box A for each period and for the cumulative budget. The section is split into “Direct Costs less Consortium FA” and “Consortium FA.” The subawardee direct costs will map to the “Direct Cost less Consortium FA” and the subawardee indirect costs will map to “Consortium FA.” These values are summed for the Total Direct Costs in Box A.
- Subawardee names as selected on the Subaward Budget Information SmartForm Q2 will map to the Project/Performance Site Locations form.

**For details on how to map the subaward budgets to the SF424 forms, refer to the section on Adding Subawards to the SF424 application.**

### 4.4 Cost Share Budgets

Please refer to the Cost Share Manual for detailed instructions on creating Cost Share budgets.

For S2S applications:

- The total amount of the cost sharing will not map to the Total Non-Federal Funds box on the SF424 (R&R) form. You will have to manually update that field in the SF424 module.
- The cost share items will not map to the R&R budget form or PHS 398 Modular Budget Form because cost share budgets should always be marked as “Include in Consolidated Budgets” = No. This is the standard process for cost share budgets. If cost share budgets are marked as “Include in Consolidated Budgets” as “yes”, then the values will appear on the R&R budget form as if they were sponsor costs, which they are not.

There are additional steps are required for funding proposals with cost share. Complete the following workspace activities:

- Complete the Create-Update Cost Share Commitment activity on the funding proposal workspace
- Add the required Ancillary Reviews with the type “Cost Sharing” and send to the appropriate cost sharing department. If the cost share is voluntary, an Ancillary Review to the ORPA director is also required for approval.

### 5 SF424 Application

The following section outlines how to create the SF424, review the SF424 application forms, make updates to the SF424 forms, add subawards to the SF424, and validate for submission.
5.1 Create-Update the SF424

Once proposal and budget information has been completed, you are ready to create the SF424 application. In Princeton ERA, the SF424 module is a separate module from the FP module.

From the funding proposal workspace, click the **Create-Update SF424 activity**.  
**Note:** This activity is used to create the SF424 application for the first time and for any subsequent updates.

In Create-Update SF424 window, select the SF424 forms you want the funding proposal or budget data to map to and Click OK.

*Required forms will default to "checked." Any optional forms can be checked as well. If this proposal includes a budget and the sponsor is NIH, either the R&R Budget or PHS 398 Modular Budget form should be selected.*
WARNING: Selecting "OK" below will **override** any manual changes previously made directly in an already created SF424 form. Do not use this activity if you are making a correction requested by a specialist.

If this is the first time this activity is being executed, select "OK" and this activity will create your SF424 application.

If this is not the first time this activity is being executed, selecting "OK" will override any manual changes made in the SF424 form. Select "Cancel" if you do not wish to execute this activity.

The status column will update as each form is generated. A success alert appears when the SF424 application has been generated and is ready for review. The window will automatically close once the process is complete; **do not "x" out of the window prematurely.**
The SF424 has been generated! A link to the SF424 will appear in the workspace under Proposal Information, which is the fastest way to navigate to the SF424 workspace. Details about the SF424 will also appear in the SF424 Summary tab on the funding proposal workspace. The summary shows the link and current state of the SF424 (which is pre-submission). Once ORPA submits the SF424 to Grants.gov, the tab will also display the tracking number, the date/time it was received, and the last time the status was updated.
The SF424 application has its own workspace and SmartForms.

### 5.2 Review the SF424 Workspace

The SF424 application has its own workspace, similar to how a funding proposal or budget has a workspace. Navigate to the SF424 workspace by clicking the SF424 link on the funding proposal workspace.

The SF424 workspace displays the proposal title and the SF424 ID. You do not need to remember the SF424 ID, since you can always navigate to the SF424 from the funding proposal. The center of the workspace provides basic demographic information and tracking info for the SF424. You can also navigate to the FP or FOA from this view.
There are tabs at the bottom of the SF424 workspace. The History tab shows all activities that are run on the SF424 workspace. The Change Log tab shows when changes are made to the SF424 application SmartForm. If you click on a change then click on “view more details”, it will show you which field was updated.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Author</th>
<th>Activity Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opened for Editing</td>
<td>Runner, Barry C</td>
<td>8/29/2020 3:51 PM</td>
</tr>
<tr>
<td>Submission validated</td>
<td>Runner, Barry C</td>
<td>8/27/2020 5:22 PM</td>
</tr>
<tr>
<td>Generated PDF Version</td>
<td>Runner, Barry C</td>
<td>8/26/2020 7:13 PM</td>
</tr>
<tr>
<td>Latest PDF version is available on workspace summary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latest PDF version is available on workspace summary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF424 Created</td>
<td>Runner, Barry C</td>
<td>8/26/2020 1:58 PM</td>
</tr>
</tbody>
</table>

The state of the SF424 application is displayed on the left side of the workspace. The initial SF424 state is Pre-Submission. Click on the Edit Grant Application button to open the SF424 SmartForm. When the application is in a read-only state, this button is labeled as “View Grant Application”.

The SF424 workspace activities are below these buttons.

- **Validate Submission**: This activity is used to check the application for completeness and accuracy. If it passes validation, the SF424 workspace will be locked and the state displays as “Valid for Submission” state. This is the state in which the GCA will review the full application prior to submitting to Grants.Gov. Review the Validate Submission section for detailed instructions.

- **Generate PDF Version**: Click this activity to generate a PDF version of your application. Check off the “Include Attachments” box to include attachments in the PDF. Once the activity is complete, the window will close, and the link to the PDF version, labeled “View”, appears in the center of the SF424 workspace in the PDF Version field. Click the “View” link to review the PDF. Note that if any
changes are made to the SF424, they will not be reflected in the PDF unless the “Generate PDF Version” activity is executed again. Sometimes the SF424 workspace indicates that the PDF needs to be regenerated but many times it does not, so be sure to execute the “Generate PDF Version” activity after making changes.

![Generate PDF Version](image)

- **Assign Editors and Reader**: This activity will display all people that have Edit and Read access to the SF424 application. It is the same list of department editors that defaulted on your FP funding proposal. Generally, if you want someone to access the SF424, they should be added to the funding proposal. The list on the SF424 is set when the SF424 is created and updated each time the Create-Update SF424 activity is executed. There have been a few unreproducible cases where the FP editors did not default on the SF424 editor list; if that happens again, the editors can be manually added here, or email erasupport@princeton.edu and the ERA Team can add them if no one available in the dept can access the SF424 record.

- **Log Comment**: This activity should generally not be used; Comments to your reviewers and GCA should be logged on the funding proposal using the Add Comment activity. This activity will add a comment to the SF424 workspace instead.

- **Import Subaward Budget**: This activity is not used. Instead, review the [Updating the R&R Subaward Budget Forms section](#) to map your subawards.

- **Import Project Budget**: This activity is not used. Instead, review the Budgets section for info on mapping your proposal budget to the SF424.

### 5.3 Review the SF424 Application

A lot of the SF424 application is populated with information from the funding proposal SmartForms, budget SmartForms, and institutional Princeton defaults. However, additional questions must be answered directly on the SF424 and your documents should be uploaded directly to the SF424 application.

Review and update your SF424 application information within the SmartForm pages. You can also generate a PDF version of the application from the workspace. When submitting to Grants.gov, the application information will be turned into an XML file that is transmitted to Grants.gov.
As you review and update the SF424, it is important to consider what kind of updates you are making and where the appropriate place is to make that edit:

- If you are editing information that is only on the SF424 (it did not map from your funding proposal or budget), make those edits directly on the SF424 application.
- If you are updating information that originally mapped from the funding proposal or budget, then you must make the edits there and use the Create-Update SF424 activity to sync those changes to your SF424 application.
- Any edits you make on the SF424 do not map back to the Funding Proposal. Any edits that are made on the Funding Proposal only map to the SF424 if the “Create-Update SF424” activity is executed. Refer to the next section on Updating the SF424 for more details and instructions.

This is not a comprehensive guide to completing the SF424 Application as the instructions and required forms may vary based on the Funding Opportunity. When in doubt, always refer to sponsor guidance or reach out to your ORPA GCA with questions. The information below will provide an introduction to commonly required forms and how they are populated by the system.
5.3.1 SF424 Form Review

Select Optional Forms Page
- Application Filing Name maps from funding proposal short title and may be updated
- Additional optional forms may be selected; required forms are listed

SF424 R&R Cover Page
- Applicant institution, EIN/Applicant Type, application contact, and AOR default from to Princeton’s information
- Project Dates, Descriptive Title, and Total Federal Funds Requested defaults from the proposal and budget.
- Manually add the total cost share in the Total Non-Federal Funds section.
- Certification must be provided
- Type of Submission and Application Information defaults. Can be updated as needed. If this is a renewal, revision, or change/corrected - ensure the proper Type of Submission and Application are selected. Confirm the appropriate federal identifier is added for renewal or revision applications. For change/corrected applications, copy and paste the original Grants.gov tracking ID.

Project/Performance Site Locations
- Trustees of Princeton University information defaults
- Subawardee locations will default
- Update or add additional performance locations, as applicable. Ensure organization name is included.

R&R Other Project Information
- Human subjects and animal information defaults based on the answers on the Funding Proposal Compliance Review page
- Complete all other yes/no questions, adding additional details if yes is selected
- Upload applicable documents directly to SF424: Project Summary/Abstract, Project Narrative, Bibliography & References Cited, Facilities & Other Resources, Equipment, Other Attachments
- If the R&R Other Project Information form question 6 “Does this project involve activities outside the United States or partnership with international collaborators?” has been answered, and the Create-Update SF424 activity is executed again with the Other Project Information form checked, the previous answer will be removed and the answer will be blanked out. You will have to answer the question again.

R&R Senior/Key Person Profile
- PI Profile defaults based on the funding proposal PI and their system information
- Internal and External personnel marked as Senior/Key persons or Other Significant contributors and their profile appears
- Degree Type and Degree Year are updated manually if required, update these as a last step or they revert to blank every time the funding proposal is synced to the SF424 with the Sr/Key Person form checked.
- Biosketches and Current & Pending documents provided for PI or Senior/Key persons on the funding proposal appear
- Add additional personnel as required (unfortunately, enter with the type “Other(Specify) - Sponsor”; does not map from the FP Personnel Q1a to this form, but mentor can additionally be added to Personnel 3a which does map to the Sr/Key Person form.
- For additional personnel the Department, Organization, and Division all default as the person’s department

PHS398 Cover Page Supplement
- Program income and human embryonic stem cell information maps from proposal compliance information
- Complete additional questions regarding vertebrate animals, human fetal tissue, inventions and patents, and change of investigator

PHS398 Research Plan
- Upload Research Plan documents directly to the SF424.

PHS Human Subjects and Clinical Trails Information
- Human subjects and study information maps based on the responses to the compliance information and the R&R Other Project information. Update information as needed.
• The R&R Budget is a single SmartForm page with a box to upload the budget justification, and links to each budget period. Click on a budget period link to open a slide-in window with that period's complete budget. Depending on the size of your monitor and browser, use the horizontal scroll bar to see the full form, or reduce your browser's font size.

• Click on the "Research & Related Budget" header to collapse all sections. Then click on a section header to expand information for just that section.

• The R&R Budget form will be created with Sections A-K for each budget period. A cumulative page will also be included.

• Personnel budget information will map to Section A - Senior/Key Personnel and Section B - Other Personnel. Information includes name, role, base salary, effort months, requested salary, fringe benefits.

• The annualized salary maps to the base salary field on the SF424 R&R Budget. For people with 9-month appointments, you will have to manually adjust the Base Salary field on the SF424, except for NIH proposals where the person is at or over the NIH salary cap so the NIH salary cap is used.

• Click on the "Research & Related Budget" header to collapse all sections. Then click on a section header to expand information for just that section.

• The R&R Budget form will be created with Sections A-K for each budget period. A cumulative page will also be included.

• Personnel budget information will map to Section A - Senior/Key Personnel and Section B - Other Personnel. Information includes name, role, base salary, effort months, requested salary, fringe benefits.

• The annualized salary maps to the base salary field on the SF424 R&R Budget. For people with 9-month appointments, you will have to manually adjust the Base Salary field on the SF424, except for NIH proposals where the person is at or over the NIH salary cap so the NIH salary cap is used.
• If the person was budgeted by calendar and academic months in the FP budget, then those sal requested months will map to the summer and academic months as appropriate on the SF424. Else the sal requested person months appear in the Calendar months section and can be manually moved from calendar months to academic and/or summer months, but please note if you execute the "Create-Update S424" activity again, it will overwrite those manual changes.

• If budgeted by summer and academic months, those sal requested fields map to the summer and academic months on the SF424. If only summer months is budgeted, then the academic months will map as 0, and calendar months will map as blank. You can leave the 0 or you can remove it from the SF424, either works.

• If budgeted by months or percentage, the sal requested person months maps to the calendar months on the SF424 PDF, truncated to 2 places past the decimal. Academic months and summer months will be blank.

• Prior to the 10.5 upgrade, Princeton ERA mapped Effort months (via the formula %effort x the number of months in the appointment type), but as of the 9/30/2023 upgrade, the Sal Requested months (as directly entered in the FP budget) map to the SF424. If % is used for FP budgeting, Princeton ERA uses the formula %sal req x the number of months in the appointment type. If effort months needs to appear on your application, please manually change the months on the SF424 budget.

• Screenshots of the R&R Budget SmartForm and the PDF produced by the Generate PDF Version activity on the SF424 workspace:
## Research & Related Budget

### Dates

- **Start Date**: 6/1/2026
- **End Date**: 6/31/2026

### A. Senior/Key Person

<table>
<thead>
<tr>
<th>Prefix</th>
<th>First</th>
<th>Middle</th>
<th>Last</th>
<th>Suffix</th>
<th>Project Role</th>
<th>Base Salary ($)</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Sum. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Snyder</td>
<td>(testpi)</td>
<td>PDPI</td>
<td>212,100.00</td>
<td>0</td>
<td>0.75</td>
<td>2.5</td>
<td>13,256.00</td>
<td>4,944.00</td>
<td>18,200.00</td>
</tr>
</tbody>
</table>

Contact PDPI: Ramsey (testpi16), Gilbert

**RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period: 4**

- **Start Date**: 06-01-2027
- **End Date**: 04-30-2028
- **Budget Period**: 4

**Total Funds Requested for all Senior Key Persons in the attached file**

Additional Senior Key Persons: File Name: Total Senior/Key Person: 18,200.00

---

Budgeted 0.75 summer months

---

## Research & Related Budget

### Dates

- **Start Date**: 01/01/2026
- **End Date**: 02/20/2026

### A. Senior/Key Person

<table>
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<tr>
<th>Prefix</th>
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<th>Middle</th>
<th>Last</th>
<th>Suffix</th>
<th>Project Role</th>
<th>Base Salary ($)</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Sum. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
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<tr>
<td></td>
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</tr>
</tbody>
</table>

Contact PDPI: Ramsey (testpi16), Gilbert

**RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period: 4**

- **Start Date**: 06-01-2027
- **End Date**: 04-30-2028
- **Budget Period**: 4

**Total Funds Requested for all Senior Key Persons in the attached file**

Additional Senior Key Persons: File Name: Total Senior/Key Person: 18,200.00

---

Budgeted 2.5 summer months

---

**post-upgrade**

The SF424 truncates months to 2 places past the decimal.

Here the 0 was manually removed from academic months on the SF424.
5.3.3 PHS 398 Modular Budget

- The Modular Budget form will be created for each period and a cumulative page will be included.
- Direct Costs (including personnel, general cost types, and subawards) will be mapped to Box A.
- Indirect Costs, including the base and rate, will map to Box B - Indirect Costs.
- Total Direct and Indirect Costs will be summed in Box C.
- The budget justification should be directly uploaded to the PHS 398 Modular Budget- Cumulative page.

5.3.4 SF424 R&R Subaward Budget

- The Subaward R&R form should be downloaded from the SF424 workspace, completed by the subawardee, and uploaded to the SF424 Subaward Import on the subaward budget SmartForm.
- The R&R Subaward Budget - Number of Subawards page will appear in the SF424 when the R&R Subaward Budget Attachment is marked as included on the Create-Update SF424 activity. Manually enter the number of subawards on the Number of Subawards SF424 page to create placeholder sub budgets for each subaward. After the completed subaward forms are successfully uploaded to the FP subaward budgets, the Create-Update SF424 activity must be run again to populate the sub budgets on the SF424.
- The SF424 R&R subaward budgets will directly reflect what is in the subaward budget file, including any budget justification attachments.

5.3.5 Budget years that cross from 62% to 64% OH and the downstream impact

- There are many places where budget dollars are displayed in the Huron system and the SF424. For this discussion, the focus is on these three areas:
  - The Funding Proposal (FP) budget amount (displayed on the FP workspace).
  - The requested amount on the SF424 Cover Page (automatically mapped by Huron from the FP budget amount).
  - The OH amounts and total amounts on the SF424 yearly budgets and on the SF424 cumulative budget (automatically filled in by Huron).
- These three cumulative amounts do not match when there is a budget year that crosses from 62 to 64%.
Specifically, the OH amount in the budget year that crosses from 62 to 64% will be slightly different than the OH amount in the FP budget mainly due to rounding and ratios; therefore the grand total for that budget period (and therefore the cumulative budget amount) will be slightly different than the grand total for the FP budget.

That means the SF424 Cover page amount (which maps from the FP budget amount) will be different than the SF424 cumulative amount. In testing, I have seen this amount range from a few dollars to $25.

- There are three options. I have tested all of these options and they all work in the NIH Test Commons environment without warnings or errors. **ORPA recommends using option 2 and if you want to go the extra mile, use option 3. Use option 1 at your own risk.**
  - **Option 1:** Leave the SF424 application as-is. The SF424 Cover Page amount matches the FP budget amount, but the SF424 Cumulative Budget will display a different amount in the SF424 application. The risk is the agency may return it or question it because the cover page amounts and cumulative budget amounts within the SF424 application do not match.
  - **Option 2:** Change the Cover Page amount to match the cumulative budget page amount; that way the amounts match within the SF424 application. The FP amount will be different.
  - **Option 3:** Use the “62%+64% FP vs SF424” tab (the second tab) of the “Blended 62% and 64% OH Rate Tool” spreadsheet in the “Tools” section of the [Princeton ERA home page](#) to update the OH rows for the budget year that crosses OH rates to match the Huron FP budget (fill in cells B2, B3, and B4, then use the values in cells D14, E14, D15 and E15 in the SF424 IDC section of the budget year that crosses OH years; these values should match the FP OH values or be very close). Doing so will in turn update the cumulative budget page. Then the SF424 cumulative budget amount will match the SF424 Cover Page amount which will match the FP workspace amount.

5.3.6 Validating the SF24 Forms
As you review the SF424 forms, use the validate button to check for errors and ensure you have all required information.

Click the Validate button in the top left corner.
The system will display errors and warnings. The red stop sign icon means this issue must be resolved before submitting. Messages with a Yellow Triangle are warnings. Warnings will not stop the submission but should be reviewed to ensure the information is correct; see more information below about subaward warnings. The green checkmark icon means that the information on the page passes validation.

To jump to a message for review, click the link in blue text. You will be brought directly to the field with an error.

- This warning about subawards means the sub form was not included while executing the Create-Update SF424 activity. Include the file and the warning will resolve.

**Required Fields**

Fields with a red asterisk are mandatory. In certain cases, Grants.gov may require additional fields to be completed in addition to the ones required by the system. Validating your application will let you know if any of these fields have been missed.

### 5.4 Updating the SF424

Changes to information that was NOT auto populated or mapped by the system may be made directly to the SF424, as there is nowhere to update this information on the funding proposal or budget. Examples
include the Research Strategy and other documents. Those fields or documents will not be overwritten by running the Create-Update SF424 activity.

However, when SF424 updates are needed for information that was initially entered on the funding proposal or budget SmartForms, the information should be updated on the funding proposal SmartForm first, and then the Create-Update SF424 activity should be run with the appropriate forms checked. It is important to note that any change you made to any field on the SF424 which was mapped from the Funding Proposal SmartForms or Budget will be overridden when you execute the Create-Update SF424 activity unless you uncheck that form in the Create-Update SF424 activity.

It is very important to follow this process for a few reasons:

- The funding proposal/budget and SF424 information should match for review and reporting purposes. It is important to make sure the information is accurate and consistent.
- If you update the SF424 directly instead of the proposal or budget and then re-run this activity later your changes will be overwritten, unless you unselect that form for updating!

  e.g. I update the equipment amount from $50,000 to $30,000 directly on the SF424, but not on the FP budget. When I run the Create-Update activity again for the R&R Budget form, my SF424 budget for equipment will revert to $50,000. The FP project budget needs to be updated to $30,000 first, then the Create-Update activity needs to be executed to map this change to the SF424 budget.

To run the Create-Update activity, select it from the funding proposal workspace.

In the pop up window, select which forms you would like to update. You can unselect any which you would not like to update. You can also add additional forms if something was previously missed.

**Note that to select all forms, select the checkbox next to “Action.” You can click this checkbox twice to “unselect” all forms.**

In the example below, the user is only updating the budget and SF424 R&R form since they only made edits to the budget (the budget amount appears on the SF424 R&R form, so it needs to be updated too).
The status column will update as each form is processed and will show which forms were “skipped” because they were not selected. A success alert appears when the process is complete, and the window will automatically close; do not “x” out of the window before the process completes.
Once your updates have been made, return to the SF424 workspace to continue your review and validation of the application.
5.5 Adding subawards to the SF424

These instructions outline how to add a subaward to your S2S application.

1. Select the Subaward Form on your SF424 Application.
The form can be added the first time you run the Create-Update SF424 activity, or it can be run again when you are ready to add the sub and include the form. Include the form by checking the box next to Research & Related Subaward Budget Attachment(s) Form.

2. Download the R&R Sub Budget Form from the SF424 workspace. Send the form to your subawardee to complete.
The subaward budget form should always be downloaded from the SF424 workspace. Do not download the form from Grants.Gov nor from the opportunity. Please download the form each time you create an SF424 with subs to ensure you have the form that corresponds to the opportunity as well as the most up to date version of the form, otherwise there will be errors. The subawardee should complete the form, including uploading their budget justification to the form.

3. Update the SF424 application with the number of subawards.
Click on the “Edit Grant Application” button to open the SF424 SmartForms. In the left navigation bar, scroll to “R&R Subaward Budget – Number of Subawards” SmartForm, click on it, and enter the number of subawards on your application. When you save, the subaward forms will be added for that number of subawards. Click save and exit the SmartForm.

4. Once you have received the SF424 subaward budget form from the subawardee, validate the form.
When you receive the completed form from the subawardee, click on the “Check Form for Errors” button within the subaward budget form to ensure there are no errors. If there are any errors in the form, they must be corrected before proceeding. Additionally, verify the values in the form have been rounded. Cents should not be included. Also check that the subaward dates are the same as the proposal dates or within the proposed date range. If any subaward period dates on the SF424 subaward budget form are earlier or later than the proposal dates, you will get an error when trying to upload the form in Princeton ERA. The form uploaded should always be the version that was downloaded from your SF424 workspace in step #2.

5. From the Budget workspace, click on the “Create Subaward” button to create the subaward budget.

6. Select the “Subaward budget detail level”. On the “Subaward Budget Information” SmartForm, Question 5, select “SF424 Subaward Import”.

7. Upload the R&R Subaward Budget Form to the “SF424 Subaward Import” SmartForm.
Upload the form, as completed by the subawardee, on the SF424 Subaward Import page. The form should always be uploaded here, not directly attached to the SF424. This will ensure your subaward budget information can be captured on the proposal budget and the SF424.

8. If there is more than one subaward on the proposal, repeat steps 4-7 for each subaward.

9. Run the Create-Update SF424 activity from the Funding Proposal workspace.
Select only the Subaward form and click OK. Navigate to the SF424 application to see the R&R Subaward Budget Form has populated with the sub data.
5.5.1 Subaward Reminders

- Always download the R&R Subaward Budget Form directly from the SF424 workspace. Using a different version or a file downloaded from Grants.gov or the funding opportunity will result in errors when trying to upload the form in the subaward budget SmartForm.
- Prior to uploading the completed form, review it to ensure all dates and amounts look correct. Click on the “Check Form for Errors” button in the subaward budget form itself. The form will not upload if there are errors; they will need to be corrected before the form can be uploaded to Princeton ERA.
- Verify the values in the subaward form have been rounded. Cents should not be included.
- The subaward dates must be the same as or within the proposal’s start and end dates. Subaward dates before and/or after the proposal end dates will result in an error while uploading the subaward budget form.
- Do not manually update the R&R Subaward Budget Forms within the SF424 module in Huron. They should always be mapped from the form which is uploaded to the Subaward Budget in the FP budget.
- The Create-Update SF424 activity can be rerun to ONLY update a desired form, such as the SF424 Subaward Budget Form. Ensure only the checkbox next to that form is checked when you run it. If you would like to update additional forms, you can keep them checked as well.
  - It is important to note that any change you made to any field on the SF424 which was mapped from the Funding Proposal SmartForms or Budget will be overridden when you execute the Create-Update SF424 activity unless you uncheck that form in the Create-Update SF424 activity.

5.6 Validate for Submission and Submission Pre-Check

After you have created and updated your SF424, you will validate the submission and run a pre-check to confirm the application is ready for submission for Grants.Gov.

5.6.1 Validate Submission

After the SF424 has been thoroughly reviewed and is considered complete, validate the submission from the SF424 workspace.

If there are no errors, executing the “Validate Submission” activity on the SF424 workspace locks the SF424 and transitions the SF424 to the “Valid for Submission” state. If you are using the dual submission process, do not validate the submission on the SF424 workspace until your finalized documents have been uploaded. The “Valid for Submission” State is a signal to your reviewer that all information in the application is considered final and ready for review and submission to the sponsor. (Using the validate link that appears after clicking the “Edit Grant Application” button will not lock the SF424; only the “validate submission” activity on the SF424 workspace locks the SF424).

On the SF424 workspace, click the Validate Submission activity. This will run validation with built in Grants.gov and sponsor rules to ensure all required information appears for submission.
A new window will display an error or warning messages. Messages with a red circle icon indicate the issue must be resolved before submission. The yellow triangle icon indicates a warning message. Warnings should be reviewed prior to submission, but the application can be submitted with warnings.

Once all issues are resolved and only warnings appear you can click Continue. If there are no issues, you will automatically be brought to the Validate Submission page.

Verify the correct required and optional forms are selected.
Note: you may select to convert attachments or allow special characters in the form fields, if applicable. Only allow special characters in form fields if permissible via sponsor guidance.

Click OK. The process will run and the window will close once it’s complete. The application will now be in the Valid for Submission state. This means it is ready for final review by the ORPA GCA before submitting to Grants.gov.
The application is now in a view only status. The blue button reads “View Grant Application” instead of “Edit Grant application.”

Notice that you may also reopen the application for editing using the Reopen for Edit activity on the left side of the page. This activity should be used in rare cases when updates are needed to the application, but it’s already been validated. If the proposal has already been submitted for department and GCA review, ensure you communicate with reviewers about why the application is being reopened and what has been changed.

5.6.2 Submission Pre-Check
Run the submission pre-check activity to ensure the SF424 data submitted is formatted correctly for electronic submission.

Click the Submission Pre-Check activity on the SF424 workspace.

A new window will open and provide a message letting you know if the xml generated is valid for submission.

Errors on this activity are extremely rare, but if an error appears – reach out to erasupport@princeton.edu for assistance troubleshooting.
6 SF424 Tracking and Next Steps

An ORPA GCA will review the SF424 and submit it to Grants.gov within Princeton ERA. This section outlines what the next steps are following validating the application for submission.

6.1 Application Submission and Checking Submission Status

Once the SF424 is in the Valid for Submission state and the proposal has been routed to Specialist Review, the GCA will review the SF424 application and submit it to Grants.gov.

When a GCA is finished with their review, they will transition the funding proposal status to Pending Submission to Sponsor. While in that status, they will submit the application to Grants.Gov. The GCA will typically leave the proposal in the Pending Submission to Sponsor state until the S2S submission has been successful. After successful submission is confirmed, the funding proposal transitions to the Pending Sponsor Review state.

When the GCA submits the SF424 to Grants.Gov, Grants.Gov receives the application and internally processes it. If the application passes Grants.gov validation, the application is ready to be retrieved by the sponsor. Some sponsors like NIH have software that frequently looks for applications that are ready for retrieval and automatically “picks up” the application and processes it in their NIH Commons system, but other sponsors like DOD, DOE, and USDA manually retrieve applications. The application will follow the path below.

The statuses from Grants.gov are sent directly to Princeton ERA. The Agency Tracking Number and Grant Tracking Number is transmitted as well depending on the sponsor; see the next subsection for information on sponsors, their terminal states, and how long it takes to reach that sponsor’s terminal state.

To view this information, refer to the SF424 workspace.
6.1.1 If the SF424 gets “stuck” trying to update the application status and Princeton ERA keeps adding rows to the History tab

You may notice “Application Status Updated” rows being automatically added to the SF424 History tab. This is the system automatically, periodically checking Grants.gov for status updates. Sometimes, however, the application has already been retrieved by the agency and you can see the application has been accepted in their portal (e.g. NIH Commons) but Princeton ERA seems stuck adding row after row to the History tab without retrieving the terminal status. Or, the application hasn’t been accepted by the sponsor yet, but Princeton ERA keeps adding row after row on the History tab. A few rows is fine but sometimes it goes overboard and starts adding a row every 10 seconds resulting hundreds of rows to the SF424 History tab. Ask your GCA or the ERA Team to click on the “Get Status Detail” activity which will “shock” the system to get it out of this incessantly-adding-rows behavior.

6.2 S2S Tracking States After the GCA Submits the Proposal to the Sponsor

- Depending on the sponsor, the application may cycle through some or all of Grants.gov states on the SF424 workspace, such as Validated by Grants.gov, Received by Federal Funding Agency, and Federal Funding Agency Tracking Number Assigned.

- The amount of time the application takes to reach each state on the SF424 workspace varies depending on the sponsor.

  - NIH
    - The terminal state is Federal Funding Agency Tracking Number Assigned.
    - The application reaches this state typically within a few minutes/under an hour.

  - DOD
    - The terminal state is Received by Federal Funding Agency.
    - The first DOD app submitted via s2s in Princeton ERA took 2.5 hours to reach that state and never advanced to the Federal Funding Agency Tracking Number Assigned state. As per the Huron user community, DOD does not retrieve from Grants.gov as frequently as NIH. A community member said that you can log into eBRAP to see if the application is there; sometimes it’s in eBRAP before you get an email that it’s been picked up from Grants.gov.

  - DOE
    - The terminal state is Federal Funding Agency Tracking Number Assigned.
    - It must reach that state relatively quickly as no one asked about the time it took to reach that state.

  - USDA
    - The terminal state is Federal Funding Agency Tracking Number Assigned.
We have only submitted 1 USDA application via s2s. The application proceeded to the Validated by Grants.gov state and then stayed in that state for about 5 days until the USDA retrieved it. It then transitioned to Received by Federal Funding Agency.

### 6.3 Change/Corrected or Other Errors

If a proposal is Rejected with Errors from Grants.gov or you identify that changes are needed to the application after submission:

1. Notify your GCA, who will execute the “Reopen for Edit” activity on the SF424 workspace.
2. Now you can edit the SF424. Copy the Grants.gov tracking number from the SF424 workspace, then click “Edit Grant Application” and paste it into the R&R Cover Page box 4c “previous Grants.gov tracking ID”
3. Update the “Type of Submission Application” on the R&R Cover Page box 1 to “change/corrected” application.
4. Make the other changes that need to be made.
5. Regenerate the PDF file using the “Generate PDF Version” activity
6. Execute the Validate Submission activity.
7. Let your GCA know it’s ready to be resubmitted. Your GCA can reivew and then submit to Grants.gov again.

### 7 NIH S2S Instructions

This section outlines instructions for the NIH opportunity types that can be submitted using Princeton ERA system-to-system (S2S) functionality. Each section covers considerations for the funding opportunity type when creating the funding proposal, budget, and SF424 application. Please note this section focuses on NIH specific instructions. Refer to the general S2S instructions earlier in this guide for general step-by-step instructions.

#### 7.1 When can NIH opportunities be submitted via s2s, can when can’t NIH opportunities be submitted via s2s?

- All R, K, F, DP opportunities can be submitted via s2s
- All U and T opportunities that use the R instructions can be submitted via s2s
- Any multi-project opportunities, such as U and T opportunities that use the M instructions, cannot be submitted via s2s and must be submitted using ASSIST.

#### 7.2 NIH R Opportunities

The “R” opportunities represent NIH’s research grant programs. This section covers considerations to keep in mind when developing the funding proposal, budget, and SF424 application for your R opportunity. Always refer to the FOA to ensure all of the funding opportunity requirements and guidelines are met.

##### 7.2.1 NIH R - Funding Proposal

- **Personnel Page:** List the PI and all other Senior/Key Personnel so that they will map to the SF424 R&R Senior/Key Person Profile Form. Associated documentation for these individuals will map to the SF424 too, so ensure the proper documentation is attached for each person. For research grant applications, typically the Biosketch will be required and Other support documentation (the Current & Pending) is not required. Only upload the documents specified in the FOA.
• **Budget Periods & Key Dates Page**: Select if this will be Modular Budget or not on Question 7. Refer to the FOA to determine which budget form should be used for the application. NIH states that “Generally, you must use the R&R Budget Form if you are applying for more than $250,000 per budget period in direct costs, and you must use the Modular Budget Form if you are applying for less than $250,000. However, some grant mechanisms or programs (e.g., training grants) may require other budget forms to be used. Refer to your FOA and to the following instructions for guidance on which Budget Form to use.”

  o If you will use the R&R Budget Form, leave the default answer of "No." If you will use the Modular Budget Form, update the answer to “Yes.”

### 7.2.2 NIH R - Budget

• **Refer to the FOA for any budgeting limits.** Some research grants may include budget limits based on the activity code or the specific FOA.

• **Salary Cap**: Ensure that if any faculty are over the NIH Salary Cap they are budgeted accordingly.
  
  In these cases, a 12 Month Appointment should be selected, and the Base Salary should be entered as the NIH Salary Cap. No inflation should be applied as this will lead to cost sharing in out years.

• **Modular Budget: Review any Modular Offsets**
  
  Princeton ERA will create a line for “Modular Offsets” if you are creating a modular budget, but the Personnel and General Cost Types do not reach a $25,000 modular increment. This line can be viewed on the Financials tab of the budget workspace. This is the system automatically rounding your budget up to the next modular increment.

### 7.2.3 NIH R - SF424 Application

• **Ensure you select the appropriate budget form** when generating the SF424 with the Create-Update SF424 activity (Research & Related Budget or PHS 398 Modular Budget may be permitted).

• **Research related documents should be uploaded directly to the SF424.** This includes the Project Summary/Abstract, Project Narrative, Specific Aims, Research Strategy, and any other documents that may be required on the R&R Other Project Information page or PHS 398 Research Plan per the FOA.

  o Always refer to the FOA for the complete list of required documents. Also consider the application type requirements (e.g. Renewal/Revision applications may require a Progress Report).

  o **Confirm all page limitations are met as described in the Table of Page Limits and FOA.** If these two differ, the FOA requirements supersede the table page limits. Please note that for R opportunities the Specific Aims is typically limited to 1 page, while the Research Strategy may vary based on the activity code.

• **Data Management and Sharing Costs (DMSP)** was introduced with the NIH H forms series and it is mandatory with some NIH applications.

  o **Modular Budgets**: If submitting a modular budget, the “additional narrative justification” file must be uploaded to specify “Data Management and Sharing Costs”
Detailed Budgets: If submitting a detailed budget, the "other plan" file must be uploaded to the Research Plan Attachments.

- If you have DMSP costs then add a budget item under “Other Direct Costs” specifically labeled as “Data Management and Sharing Costs” (without quotation marks).
  - If there are no costs for this item, do not include this item (upon initial release of the NIH H forms series, the budget line had to be present, even if it was $0. NIH has since announced this budget row only needs to be included if there is a cost.)
  - If you are budgeting costs for this item, there is no corresponding Princeton ERA budget item to select for this cost. Select an existing Princeton ERA budget item for the cost, then manually break it out in the Other Direct Costs section of the SF424. Please work with your GCA.
  - The line item must be manually typed into the form exactly as “Data Management and Sharing Costs” (without the quotation marks):

7.3 NIH K Opportunities

The “K” opportunities represent NIH’s career development awards (CDA). This section covers considerations to keep in mind when developing the funding proposal, budget, and SF424 application for your K opportunity. Always refer to the FOA to ensure all unique requirements are met.

7.3.1 NIH K - Funding Proposal

- **General Proposal Information/Personnel Page - Principal Investigator**: The career development candidate should be listed as the PD/PI. This will map to the SF424 R&R Form and R&R Senior/Key

![Image of Modular Budget](image-url)
Personnel Profile Form. Ensure their biographical sketch is provided; a Current & Pending is generally not required unless specified by the FOA.

- **Personnel Page – Mentor & Co-Mentors:** For mentored career development awards, add the mentor to field 1a Mentor and to 3a Project Personnel. Add any co-mentors to field 3a Project Personnel.
  - Mentors only entered in 1a will not map to the R&R Senior/Key Personnel Profile Form. Senior/Key Personnel or Other Significant Contributors entered in Question 3 will map to the SF424 with the information provided for them.
  - For all mentors and co-mentors, ensure their NIH Commons username is provided. Provide a Biographical Sketch and Current & Pending, unless otherwise noted by the FOA.
  - Enter their Project Role as “Other (Specify)” and for Project Role Category field list “Mentor” or “Co-Mentor” as applicable.
  - Applications may also include collaborators, consultants, and advisory committee members. These individuals are generally not added as senior/key personnel but refer to NIH guidance to determine the full list of senior/key personnel. Personnel who you may wish to list on the proposal but do not want to map to the SF424 can be listed as “Other Personnel”.

7.3.2 NIH K - Budget

7.3.2.1 NIH K - General Proposal Information

- **Select that the budget does not use a standard Base and Rate on Question 3. Enter the FA Cost Base as TDC and the Rate as 8%.** For most career development award applications, indirect costs are reimbursed at 8% of modified total direct costs rather than on Princeton’s negotiated rate agreement.

- **Transitional career development awards may have out-years at a different FA rate; Update those years on this chart.** The same Princeton ERA budget may have different FA rates per period. For example, the K99/R00 may have a 0% FA rate for the R00 Independent Phase.
7.3.2.2 NIH K - Personnel Budgeting

- Only the candidate should be budgeted. Include their base salary, person months, and requested salary and fringe benefits. Career development programs typically include a minimum effort requirement of nine person months of 75%. Ensure the minimum effort requirement is met per the FOA.
  - Requested salary should be based on the institution base salary at the time the application is submitted, and not adjusted for any limitations. Any adjustments for salary limitation will be made at the time of award.
- If this is a K99/R00 and the R00 years are to be budgeted as “Other” do not budget Salary and Benefits for the Personnel on the Personnel Cost page. Enter the candidates Effort but set Sal Req and FB to “0”. Salary and FB requested will be included in the “Other” general cost type.
- In the K99/R00, a cost share budget is not needed for the difference in Effort % and Sal Req %. Due to the difference in Effort and Salary Requested per the opportunity requirements, Princeton ERA will automatically display a cost share message on the budget. It will say “This budget has a salary overage of $X. Use the Cost Share creator to properly capture these costs.” Ignore this message. DO NOT create a cost share budget. DO NOT use the “create-update cost share commitment” activity.

7.3.2.3 NIH K - General Cost Type Budgeting

- General Cost Types for K should be itemized by cost type.
  - Please note that NIH may indicate on an FOA that all General Cost Types can be entered as “Materials and Supplies.” However, they also state in the general SF424 K instructions that applicants can enter costs in the applicable detailed budget categories as well. They specifically state that those submitting S2S may opt for this approach. The applicant is
responsible for ensuring that the total research development costs do not exceed the allowable total.

- If you are unsure how to budget for a particular funding opportunity, please reach out to your GCA.

- For transitional career development awards, some years may be budgeted on an itemized level while others should be budgeted as Other. For the K99/R00 all K99 years should be budgeted on the itemized level by using the general cost types. For the R00 years, budget all costs (including personnel) as the general cost type "Other". Enter the description "R00 Independent Years".  

7.3.3 NIH K - SF424 Application

- **SF424 R&R Form – Cover Letter Attachment:** Ensure the cover letter is uploaded directly to the SF424 application, as required per the FOA.
  
- **Mentored Career Development Award (CDA) applicants must include a cover letter with a list of referees; Non-mentored CDA applicants are encouraged but not required to include the cover letter. Refer to the FOA for additional details.**

- **R&R Other Project Information Form:** Attach documents directly to the SF424 application. Project Summary/Abstract should summarize the research project and describe the candidate’s career development plan, career goals, and the environment in which the career development will take place. This attachment is typically limited to 30 lines of text. The Project Narrative should describe the relevance of the project in 3 sentences. Refer to the FOA and Table of Limits to confirm all restrictions are met.

- **R&R Senior/Key Person Profile Form:** Confirm candidate (PI) and any mentors/co-mentors map from the FP. If the mentor was listed on the Funding Proposal SmartForm – Personnel Page 1a but not also listed in 3a Project Personnel, they will not map and must be manually added here. Add the Mentor, with a Role of “Other (Specify)” and type the category of “Mentor”. Ensure their biographical sketch, Current & Pending, and NIH Commons username are included.

- **PHS 398 Career Development Award Supplemental Form:** This form should only be used for submitting a career development award or for multi-project applications with an “Indiv. Career Dev” component. Refer to the FOA for guidance on completing this section, as some sections of the form are required for all K applications while others are only needed if specified by the FOA. Attach all documents directly to the SF424 (such as Specific Aims, Research Strategy, and Candidate Background and Goals).

- **PHS Human Subjects and Clinical Trails Information:** K applicants who are not proposing a clinical trial should follow the standard forms for completing this page. If the applicant is proposing an independent clinical trial or proposing to gain clinical trial research experience under a mentor’s supervision, should confirm the FOA allows this and follow specific NIH guidance for that scenario.

- **R&R Budget Form:** All career development applications must use the R&R Budget Form; The Modular Budget Form is not permitted. Confirm budgeting instructions are followed per the applicable FOA.
  
- **A. Senior Key Person Section:** Only the candidate should be budget. Ensure effort and salary guidelines are followed.

- **Transitional Career Award Applications follow unique budgeting requirements.** For the mentored phase of these awards, budgets are negotiated with the sponsoring intramural laboratory. For awardees who receive the approval to transition to the extramural phase of these awards, a budget will be required as part of the extramural sponsored application.

- **For the K99/R00, confirm K99 years are budgeted with itemized cost types. For the R00 years, confirm section F. Other Direct Costs includes the total requested (including
Personnel costs). The line will map as “Other”, so manually update the line description as “R00 Independent Phase.”

- **Budget H. Indirect Costs**: Confirm this section is completed in compliance with the FOA. Career development awards are typically set up with an MTDC base at indirect cost rate of 8%. FA Rate may vary based on period for transitional career development awards.

- **Data Management and Sharing Costs (DMSP)** was introduced with the NIH H forms series and it is mandatory with some NIH applications.

- **Detailed Budgets**: If submitting a detailed budget, the "other plan" file must be uploaded to the Research Plan Attachments if required for your opportunity.

7.4 NIH F Opportunities

The “F” opportunities represent NIH’s Fellowship Awards. This section covers considerations to keep in mind when developing the funding proposal, budget, and SF424 application for your F opportunity. Always refer to the FOA to ensure all unique requirements are met.

7.4.1 NIH F - Funding Proposal

- **General Proposal Information/Personnel Page – Principal Investigator**: The Fellow (student) should be listed as the PD/PI. This person will map to the SF424 R&R Form and R&R Senior/Key Personnel Profile Form as the PI, which is what NIH expects. Add their biographical sketch; a Current & Pending is typically not required unless specified by the FOA.

- **Personnel Page – Sponsors & Co-Sponsor(s)**:
  - Add the primary sponsor to field 1a Mentor. Then, either add the primary sponsor again in 3a (so that they map to the SF424 Sr/Key Person form) or manually add them to the SF424 Sr/Key Person form.
    - Mentors only entered in 1a will appear in the “Display Team COI Information” activity but will not map to the R&R Senior/Key Personnel Profile Form. Senior/Key Personnel or Other Significant Contributors entered in Question 3a will map to the SF424 Sr/Key Person form with the information provided for them.
  - Add any co-sponsors to field 3a Project Personnel.
  - Enter their Project Role as “Other (Specify)” and for Project Role Category field list “Sponsor” or “Co-Sponsor”, as applicable.
  - Sponsors and co-sponsors should be identified as senior/key personnel, even if they are not committing any specified measurable effort to the proposed project.
  - For all sponsors and co-sponsors, ensure their NIH Commons username is provided. Provide a Biographical Sketch. Current & Pending is typically not needed, unless specified by the FOA.
  - Applications may also include collaborators, consultants, and advisory committee members. These individuals are generally not added as senior/key personnel but refer to NIH guidance to determine the full list of senior/key personnel. Personnel who you may wish to list on the proposal but do not want to map to the SF424 can be listed as “Other Personnel”.

PHS 398 Research Plan V5.0

Research Plan Attachments: Other Plan(s) The "Data Management and Sharing Plan" attachment must be included for this application. (NIH 010.17)
• **Compliance Review Page** – Ensure any associated IACUC or IRB protocols are listed with the proper designation, as these will map to the SF424.
  - If the fellow is participating in research supported by a research project grant for which the IRB review or IACUC review has already been completed, approved, or exempt then the current designation is sufficient, provided the IRB or IACUC determines the participation of the Fellow does not substantially modify the research. Ensure the appropriate designations are provided.

7.4.2 NIH F - Budget

• **Enter the budget using standard budgeting practices.** The total will map to the SF424 R&R Form Total Federal Funds Requested.
  - Refer to the NIH Research Training and Career Development website for current stipend and other budgetary levels.
  - For F32s, the stipend as per the NRSA scale should be filled in for the personnel budget and the institutional allowance should be budgeted as a general cost.

• **On the SF424, PHS Fellowship Supplemental Form section will need to be completed manually;** It will not map from the Princeton ERA budget. However, it is important to ensure that these budgets match.

7.4.3 NIH F - SF424 Application

• **SF424 R&R Form:** Ensure fields are filled out appropriately. Fellow should be listed as the PD/PI. Cover letter containing a list of the applicant’s references (including name, departmental affiliation, and institution) should be uploaded directly to the SF424.

• **R&R Other Project Information Form:** Ensure additional documents are uploaded directly to the SF424 such as the Project Summary/Abstract, Project Narrative, Foreign Justification (if needed), Bibliography, and Facilities & Other Resources. Refer to the FOA and Table of Limits for guidance. Review IRB and IACUC protocols mapped over from the funding proposal.

• **Project/Performance Site/Location(s) Form:** Ensure the sponsoring organization (Princeton) is one of the sites included. Typically, this will be the primary location. If training described in the Research Training Plan will be conducted in multiple locations, add the additional locations.

• **R&R Senior/Key Person Profile Form** - Confirm candidate (PI) and any sponsors/co-sponsors map from the FP.
  - If the sponsor was listed on the Funding Proposal SmartForm – Personnel Page 1a but not 3a Project Personnel, they will not map and must be manually added here. Add the sponsor, with a Role of “Other (Specify)” and type the category of “Sponsor”. Ensure their biographical sketch and NIH Commons username are included.

• **PHS Fellowship Supplemental Form:** This form is used specifically for submitting fellowship applications. Review the FOA to determine which sections of the form are required and how to properly fill them out. Upload all required attachments directly to the SF424.
• **Budget Section** – Budget information will not map to this section from the funding proposal. Enter the budget information on this form, and ensure it matches the funding proposal budget.

• **PHS Human Subjects and Clinical Trails Information** – Fellowship applicants who are not proposing a clinical trial should follow the standard instructions for completing this form. If the applicant is proposing to gain clinical trial research experience under a mentor’s supervision, they should confirm the FOA allows this and follow specific NIH guidance for that scenario. Independent clinical trials are not permitted for Fellowships.

• **Data Management and Sharing Costs (DMSP)** was introduced with the NIH H forms series and it is mandatory with some NIH applications. If required for your opportunity, the “other plan” file must be uploaded to the Research Plan Attachments.

7.5 NIH DP Opportunities

The [NIH Director's Pioneer Award](https://nihdirector.nih.gov/awards/pioneeraward.html) “supports individual scientists of exceptional creativity who propose highly innovative and broadly impactful research towards the ultimate goal of enhancing human health.” This section covers items to keep in mind when developing the funding proposal, budget, and SF424 application for your DP opportunity. Always refer to the FOA to ensure all unique requirements are met.

### 7.5.1 NIH DP - Funding Proposal

- **Personnel Page** – Ensure the PI’s current & pending is uploaded and up to date.
- **Personnel Page** – Project Personnel Section – Senior Key Personnel and Other Significant Contributors added here will map to the SF424. Typically, additional key personnel should not be listed on the SF424 R&R Senior/Key Person Profile. Personnel who you may wish to list on the proposal but do not want to map to the SF424 can be listed as “Other Personnel” in this section.

### 7.5.2 NIH DP - Budget

#### 7.5.2.1 NIH DP - Personnel Budgeting

- **Do not budget DP awards using the cost type of “Other”**. Even though this opportunity does not have a SF424 detailed nor modular budget form, “other” should not be used. This is because the effort must be tracked in Princeton ERA; this effort will also appear on the Current & Pending Support report.

- **Effort Requirements based on the FOA:**
  Pioneer awardees are required to commit the major portion (more than 6 person-months or at least 51%) to activities supported by the Pioneer Award research project in the first three years of the project period. See the FOA for additional details.

  - For example, the available total effort is 4.5 academic months (one-half of a 9 month academic year) + 2.5 summer months = 7 months
  - 51% of 7 months of research effort is 3.57 months, which could include summer charged to the award. For example:
- The overall 3.57 person months is entered into the “effort” box in the Princeton ERA budget.
- The 2.5 months of summer effort is entered into the “salary requested” box in the Princeton ERA budget. The “salary requested” is charged to the sponsor.

- **No cost share budget or cost share commitment activity are needed in Princeton ERA for DPs.** Due to the difference in Effort and Salary Requested per the opportunity requirements, Princeton ERA will automatically display a cost share message on the budget. It will display this message: “This budget has a salary overage of $X. Use the Cost Share creator to properly capture these costs.” Ignore this message. DO NOT create a cost share budget. DO NOT use the “create-update cost share commitment” activity.

- **No cost share ancillary reviews are needed either.**
  The department approver is approving the large effort commitment by approving the proposal.

- **Keep in mind that AY time commitment to research cannot exceed 4.5 months across the C&P, if funded, without DOF approval.**

### 7.5.2.2 NIH DP - General Cost Type Budgeting

- **General Costs should be budgeted at the itemized level within Princeton ERA.** Do not budget all general costs as “Other.”

### 7.5.3 NIH DP - SF424 Application

- **SF424 R&R Cover Page** – Fill in the Agency Routing Identifier with the proper Science Area Designations. Refer to the FOA for codes and abbreviations.

- **Research and Related Senior/Key Person Profile** – Information should only be provided for the PD/PI – Do not complete for additional personnel. Other key personnel are not required but may be included in the Essay. Review if personnel have mapped from the funding proposal and update as needed.

- **Data Management and Sharing Costs (DMSP)** was introduced with the NIH H forms series and it is mandatory with some NIH applications. The “other plan” file must be uploaded to the Research Plan Attachments if it is required for your opportunity.
7.6 NIH U Opportunities

The “U” opportunities represent NIH’s available cooperative agreements in which there is substantial Federal scientific or programmatic guidance. U opportunities that include a single project can be submitted using Princeton ERA S2S; Multi-project applications should be submitted using NIH ASSIST. If the opportunity FOA states “follow the Research (R) Instructions in the SF424 (R&R) Application Guide”, it is OK to proceed with S2S. If the FOA says states “follow the Multi-Project (M) Instructions in the SF424 Application Guide” then Princeton ERA S2S will not be possible. Always refer to the FOA to ensure all unique requirements are met.

7.6.1 NIH U - Funding Proposal

- **General Proposal Information**: Most Us are Cooperative Agreements, ensure this is selected as the Instrument type.
- **Personnel Page**: Ensure all appropriate personnel are listed as they will map to the SF424. Typically, a Biosketch is required for each person and a Current & Pending is not required. Confirm with the FOA.

7.6.2 NIH U - Budget

- **Enter the budget using standard budgeting practices**: Most U opportunities will require the R&R Budget form. Budget data will map directly from the proposal budget to this form.
- **Many U opportunities will list specific budget limits** for each year. Ensure the limits are not exceeded.

7.6.3 NIH U - SF424 Application

- **SF424 R&R Form, R&R Other Project Information, R&R Senior/Key Person Profile, Project/Performance Site/Location(s) Form, PHS 398 Cover Page Supplement**: These forms are typically required for U opportunities; generally, they should be completed similar to a Research proposal except for where noted differently within the FOA.
  - Double-check if the FOA states the “Research (R) Instructions in the SF424 (R&R) Application Guide” should be followed. If it says to follow the “Multi-Project (M) Instructions in the SF424 Application Guide,” this is not a candidate for Princeton ERA S2S and should instead be submitted via ASSIST.
- **R&R Budget**: Most U opportunities will require the R&R budget form; Budget data will map directly from the proposal budget to this form. Refer to the specific FOA for any budgeting limits or exclusions to allowable costs. Specific instructions may also be given regarding the F&A rate; The instructions may request supporting documentation such as uploading the F&A agreement to the R&R Other Project Information form – as an “Other Attachment.”
- **PHS 398 Research Plan**: Refer to the FOA for specific requirements. Most U opportunity FOAs will have specific guidance on content to include in the Specific Aims, Research Strategy, Letters of Support, Resource Sharing Plan, and Data Sharing Plan. Specific limits or instructions on Appendix documents are also typically provided. These instructions are typically very specific to the opportunity.
  - **Data Management and Sharing Costs (DMSP)** was introduced with the NIH H forms series and it is mandatory with some NIH applications. The “other plan” file must be uploaded to the Research Plan Attachments if it is required for your opportunity.
• **PHS Assignment Request Form:** This form is typically optional for U opportunities. It may be used to communicate specific application assignment and review preferences but is not considered part of the assembled application. To include this form, mark the check box next to it when running the Create-Update SF424 activity.
  \[
  \begin{align*}
  \text{o} & \quad \text{Funding Opportunity Number and Title will default on the form; All other information will default blank and should be updated as applicable. All fields and sections do not need to be completed.}
  \end{align*}
  \]

### 7.7 NIH T Opportunities

The “T” opportunities represent NIH’s Training opportunities. This section covers items to keep in mind when developing the funding proposal, budget, and SF424 application for your T opportunity. Always refer to the FOA to ensure all unique requirements are met.

Please note that if you are applying for a multi-project application which includes a training component, the application should not be submitted via S2S. Princeton ERA S2S is not intended to be used for multi-project applications.

#### 7.7.1 NIH T - Funding Proposal

- **Personnel Page:** Ensure all appropriate personnel are listed as they will map to the SF424. Typically, a Biosketch is required for each person and a Current & Pending is not required. Confirm with the FOA.
  \[
  \begin{align*}
  \text{o} & \quad \text{For T applications, NIH states the Profile – Senior/Key person information section should include program directors and “any other individuals whose contributions are critical to the development, management, and execution of the Research Training Program Plan in a substantive, measurable way (whether or not salaries are reimbursed) should be included as senior/key persons. Include program staff as applicable.”}
  \end{align*}
  \]

#### 7.7.2 NIH T - Budget

- **Enter the budget using standard budgeting practices.** Most T opportunities will require the PHS 398 Training Budget Form. Budget data will not map to this form, but it is still important to ensure a detailed and accurate budget is captured in the proposal budget.
  \[
  \begin{align*}
  \text{o} & \quad \text{Many T opportunities will have an F&A rate of 8%, instead of using the institutional rate. This is true for all Institutional Kirschstein-NRSA awards. To update the F&A rate, navigate to the General Budget Information page within the Budget SmartForm. Select that the budget does not use standard F&A rates. Enter the base and rate per the FOA.}
  \end{align*}
  \]
  \[
  \begin{align*}
  \text{o} & \quad \text{Refer to the opportunity to determine the base (typically MTDC or NIH Training Grant) and rate.}
  \end{align*}
  \]
When budgeting General Costs for the T, most will primarily use the Trainee budget items. Please refer to the list below:

- Trainee: Tuition
- Trainee: Travel
- Trainee: Subsistence
- Trainee: Stipend
- Trainee: Other

Note that at the time of the award these will all map to PeopleSoft as PARTC (Participant Support Costs).

### 7.7.3 NIH T - SF424 Application

- **SF424 R&R Form**: Ensure fields are filled out appropriately. Note that Ts typically start July 1 and typically no program income should be included.

- **R&R Other Project Information form**: Human subjects, animal, and stem cell answers from the proposal will map. All other answers should be completed manually. Note that trainees human research or animal research may be supported by separate research project grants which have existing IRB or IACUC approvals or exemptions. Refer to NIH guidance to determine the proper approvals needed from an IRB and IACUC perspective specifically to the training grant.
  - The Project Abstract, Project Narrative, Bibliography & References Cited, Facilities & Other Resources, and Equipment attachments are typically required unless otherwise noted by the FOA. All of these documents can be uploaded directly to the SF424.

- **R&R Senior/Key Person Profile Form**: Confirm personnel map from FP. Note that if multiple PD/Pis are proposed, the Research Training Program Plan Form should include the rationale in the Program Plan attachment and a Multi-PD/PI Leadership Plan attachment.

- **Project/Performance Site/Location(s) Form**: Princeton will automatically map as the primary location. Any additional locations that will be used for the program (including for training, program management, and research training experiences) should be listed on this form.
  - Additional sites can be added under the “Additional Project/Performance Site Locations” section. Click the Add button and enter the locations information. Note that its important to ensure you list an Organization Name even though this is not a required field – the SF424 will not be able to validate unless the name is included. You will receive an error message saying to contact the site administrator.

- **PHS 398 Training Budget**: This form is used for most training applications (T15, T32, T34, T35, T36, T90). Information from the proposal budget does not automatically map to this form, so the form...
must be filled on manually on the SF424. Ensure that all budget amounts tie to the proposal budget.

- The form will initially only appear for one period. Enter the number of budget periods and the forms will appear for the additional out-years. Enter the Start and End Dates for the specific period versus the full project.
- Enter the number of trainees based on their type and whether they are Full Time or Short Term. Confirm that all types entered are eligible per the FOA.
- Enter the Total Stipend Amount and Total Tuition/Fees for each trainee type. The overall totals for this section will automatically calculate. Refer to NIH guidance for current stipend levels.
- Enter Other Direct Costs (such as Trainee Travel, Training Related Expenses, Total Direct Costs from R&R Budget Form, and Consortium Training Costs as applicable) and Indirect Costs.
  - Note that Indirect Cost Type will typically be “F&A” and the rate will be 8%. Confirm via the FOA.
- Note that to see totals update, you will need to click “Save” on the bottom right corner of the page.
- The Budget Justification is typically required and should be uploaded for the entire project period
- The Cumulative Budget page will provide a summary of all periods and will automatically calculate.

- **PHS 398 Research Training Program Plan**: This form is required for most training applications. It includes fields to upload several attachments. The Program Plan is always required, while the other forms may vary. Ensure all attachments are PDFs and match the required page limits. All documents can be uploaded directly to the SF424.
  - **Data Management and Sharing Costs (DMSP)** was introduced with the NIH H forms series and it is mandatory with some NIH applications. The “other plan” file must be uploaded to the Research Plan Attachments if it is required for your opportunity.

- **PHS Assignment Request Form**: This form is typically optional for T opportunities. It may be used to communicate specific application assignments and review preferences but is not considered part of the assembled application. To include this form, mark the check box next to it when running the Create-Update SF424 activity.
  - Funding Opportunity Number and Title will default on the form; All other information will default blank and should be updated as applicable. All fields and sections do not need to be completed.
This section outlines instructions for submitting Department of Defense (DOD) proposals using Princeton ERA system-to-system (S2S) functionality. It includes considerations for developing the funding proposal, budget, and SF424 application. Instructions are included for common DOD forms which have been tested.

Please note this section focuses on DOD specific instructions. Refer to the general S2S instructions earlier in this guide for step-by-step instructions.

8.1 DOD Funding Opportunities

8.1.1 When can DOD proposals be submitted via s2s, and when can’t they be submitted via s2s?

- DOD opportunities that can be submitted via Grants.gov can be submitted via S2S.
- DOD pre-applications, executive summaries, abstracts, or white papers typically cannot be submitted using Grants.gov and therefore cannot be submitted via s2s.
- Always refer to the funding opportunity for submission guidelines, as the portal for proposal components or submission method may vary.

Below are instructions for DOD proposals including considerations for completing the funding proposal, budget, and SF424 application. Remember to always refer to the specific FOA to ensure all specific requirements are met.

8.1.2 DOD - Funding Proposal

- **Personnel Page**: List the PI and all other Senior/Key Personnel so that they will map to the SF424 R&R Senior/Key Person Profile form. Upload the Biosketch, as this is typically required. Only upload the Current & Pending to the Other Support document field if required per the FOA.

8.1.3 DOD - Budget

- **Detailed Budget**: DOD proposals typically require a detailed budget. Budget personnel on the Personnel Costs Page and all other expenses on the General Cost Types page. Refer to the funding opportunity for any specified budgeting limits.

8.1.4 DOD - SF424 Application

This section provides information on completing the required SF424 application forms for DOD proposals. The first section covers the most common forms including the R&R forms, SF424 Attachment Form, Personal Data, and Project Abstract. The Additional Forms section includes forms which are less frequently used but may be required for your proposal submission.

**Standard Forms**

- **SF424 (R&R)** – Always refer to the FOA for specific instructions regarding the cover page. Many DOD FOAs have unique requirements for fields such as the Federal Identifier, Agency Routing ID, and Descriptive Title. If a white paper or pre-application has been submitted, you may be required to identify its assigned number.

- **R&R Senior/Key Person Profile**: Senior Key Personnel from the Funding Proposal – Personnel page will map. Biosketches and Other Support documents should be uploaded to the FP and map to the
form. Follow the requirements outlined in the FOA to attach the documents with the proper names and format.

- **Project/Performance Site Location(s) (R&R):** The Trustees of Princeton and any subaward locations will map automatically. If needed, add additional performance site locations. Ensure you include an Organization Name as otherwise a validation error will occur (see the S2S Known Issues and Quirks Section for more details).

- **R&R Other Project Information:** Human subjects, animal, and embryonic stem cell information will map from the funding proposal. Answer all other questions manually and upload documents requested per the FOA.
  - The Project Abstract is a required field on this form, however the FOA may request the abstract is added to a different form (such as SF424 Attachments, Project Abstract, or Project Abstract Summary). In this case, a “dummy” or placeholder document should be uploaded to the R&R Other Project Information form to satisfy the upload requirement. It may state where the Project Abstract is uploaded per the FOA.

- **R&R Budget/R&R Subaward Budget:** The R&R budget will map from the proposal budget. Upload the budget justification directly to the SF424. For detailed steps on adding a subaward, refer to the Add Subawards to the SF424 section.

- **R&R Personal Data:** The Principal Investigator First Name and Last Name will default based on the proposal PI. These are the only two required fields on this form, however additional demographic information can be added for the PI as well including Gender, Race, Ethnicity, Disability Status, and Citizenship.
  - Additional Co-PD/PIs listed on the proposal will not automatically default and must be manually added here. Add any additional Co-PD/PIs using the “Add” button. This will create an additional form for them so you can enter their demographic information.
  - Up to 4 additional Co-PD/PIs can be added to the form.
  - This form does not validate the personnel added match the proposal personnel; Please confirm the correct proposal individuals and their corresponding demographic information is entered.
  - Since only the PI First Name and Last Name fields are required, this form will validate (with a green checkbox) with only that default information. Please ensure you add the appropriate additional information and do not accidentally skip the form.
  - **Note that on the SF424 application SmartForm page the header “Name” appears for the Race, Ethnicity, and Disability Status columns. This will not appear on the PDF form or submitted application.**

- **SF424 Attachments:** Follow the requirements outlined in the FOA to attach all required documents in the outlined sequence with the proper names and format. Use the DOD provided templates, as applicable.
  - The drag & drop functionality can be used on this form to upload attachments by simply dragging them from your computer Documents onto the form. Documents must be saved
with the proper name before drag & dropping. You can also select “Upload” and “Choose a File” to search for a file. The title can be updated within the Title field.

- After a document has been added, you can select the ellipses next to it to Download a Copy, Upload a Revision, or Delete.

- Princeton ERA does not validate that the proper attachments are uploaded, nor that they follow the required naming convention per the FOA. Please confirm these items.
  - If a document is uploaded twice with the same title (file name), you will receive a validation message when you run the Validate SF424 activity, unless you have checked the checkbox to skip the Unique File Name Check.

- Always attach the document in the format specified by the FOA. Any documents that are not as attached in PDF format will create a validation warning within the SF424 application SmartForm or when running the Validate SF424 activity. This warning is not a hard-stop and can be ignored if it conflicts with the FOA instructions.

- Templates may be provided in PowerPoint or Excel format. PowerPoint documents should typically not be used on the SF424 and should instead be saved as PDFs. PowerPoints will not appear in the PDF compilation of your SF424 application. Excel will render as expected.

- If you run the SF424 application validation prior to uploading any documents to the Attachments page, you will receive a validation error saying that the form is required. The error will resolve once documents are attached and the page is saved.

- **Project Abstract Summary**: Some DOD opportunities will require the Project Abstract Summary form to be submitted instead of or in addition to the Project Abstract on the R&R Other Project Information form.
  - Funding Opportunity Number, CFDA, Applicant Name, and Descriptive Title of Applicant’s Project default based on the Funding Opportunity and SF424 R&R Cover Page.
  - Add the Project Abstract to the Project Abstract field. The abstract is typically limited to 4,000 characters or less (including spaces). The SmartForm will alert you if the text exceeds the character limit. Refer to agency instructions for any additional requirements.
    - If copying and pasting from Word, confirm that all information renders properly.
    - Refer to FOA guidance regarding special characters; If special characters will be used, select “Allow special characters to be included in the XML” when validating the submission.

- **Project Abstract**: Some DOD opportunities will require the Project Abstract form which is used to upload the Project Abstract attachment. Refer to the FOA for all formatting, content, and naming conventions. Typically, the Project Abstract should not exceed one page. Princeton ERA will not validate page limitations.
  - The Project Abstract should be uploaded as a PDF. If the document is not a PDF, this will create a validation warning within the SF424 application SmartForm or when running the Validate SF424 activity.
  - If you run the SF424 application validation prior to updating the Project Abstract, you will receive a validation error saying that the form is required. The error will resolve once a document is uploaded and the page is saved.

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**Additional Forms**

This section provides instructions for additional SF424 forms which may be required or optional for your DOD proposal application.
• **SF424 Grants.gov Lobbying Form**: This form is typically optional for DOD and should only be submitted if applicable. The standard form language will default. The Applicant Organization and AOR information will default from the SF424 Application cover page. No additional updates are needed to this form; The signature and signing date will default when submitted to Grants.gov.

• **SF424 Disclosure of Lobbying Activities – SFLLL**: This form is typically optional for DOD proposals and should only be submitted if applicable.
  - The form will appear blank. No information will default, so this form must be completed manually.
  - Maximum of 10 Individuals Performing Services can be listed.
  - Validations do not confirm that information provided on this form matches the overall proposal, but it will confirm that all required fields have been completed.
  - Please note that there is also a field for uploading the SFLLL Disclosure of Lobbying activities on the SF424 R&R Cover Page. If the form has already been completed outside of the system or if additional Explanatory Documentation should be provided, it may alternatively be uploaded on the R&R Cover Page.

• **Key Contacts**: This form is typically optional and can be added as applicable. No information will default from the system; The Applicant Organization Name and Key Contact information will be entered manually. The system will validate that all required fields are entered.
  - Only 4 Key Contacts can be listed, per Grants.gov guidance.
  - If you run the SF424 application validation prior to completing the Key Contacts page, you will receive a validation error saying that the form is required. The error will resolve once information has been added.

• **Budget Narrative Attachments**: Upload the required Budget Narrative. Additional budget narrative documents may be added as well. PDF documents are typically preferred, but confirm any requirements based on the FOA.

• **Project Narrative Attachments**: Upload the required Project Narrative. Additional project narrative documents may be added as well. PDF documents are typically preferred, but confirm any requirements based on the FOA.

• **Budget Information for Non-Construction Programs (SF-424A)**: Proposal budget information will not map; this form must be completed manually. Refer to agency instructions as requirements may vary for the functional or activity breakdown structure.

• **SF424 Assurances – Non-Construction Programs**: Title and Applicant Organization will default from the SF424 Application for Federal Assistance. The Signature of Authorized Certifying Official and signature date will be completed upon submission to Grants.gov.
9 DOE S2S Instructions

This section outlines instructions for submitting Department of Energy (DOE) proposals using Princeton ERA system-to-system (S2S) functionality. Please note this section focuses on DOE specific instructions. Refer to the general S2S instructions earlier in this guide for general step-by-step instructions.

9.1 DOE Agencies & Funding Opportunities

When can DOE proposals be submitted

9.1.1 When can DOE proposals be submitted via s2s, and when can’t they be submitted via s2s?

- DOE opportunities that can be submitted via Grants.gov can be submitted via S2S.
- DOE pre-proposals or concept papers typically cannot be submitted using Grants.gov and therefore cannot be submitted via s2s.
- DOE full proposals that are required to be submitted through the EERE Funding Opportunity Exchange instead of Grants.gov cannot be submitted via s2s.
- Always refer to the funding opportunity for submission guidelines, as the portal for proposal components or submission method may vary.

Below are instructions for DOE proposals including considerations for completing the funding proposal, budget, and SF424 application. Remember to always refer to the specific FOA to ensure all specific requirements are met.

9.1.2 DOE - Funding Proposal

- Mapping Information: Depending on the SF424 forms used, a good portion of the funding proposal information may not map to the SF424 application SmartForms. It is still important to ensure the funding proposal is complete and accurate.
- Documents: Most submission documents will be uploaded directly to the SF424 on the Other Attachments form. Note that documents uploaded to the FP and Budget will not map to the SF424.

9.1.3 DOE - Budget

- Detailed Budget: Though not all DOE proposals will require a detailed budget or the SF424 R&R Budget form, the budget should still be completed at the detailed level. Budget personnel on the Personnel Costs Page and all other expenses on the General Cost Types page. Refer to the funding opportunity for any specified budgeting limits.

9.1.4 DOE - SF424 Application

This section provides information on completing the SF424 application for your DOE proposal. This section provides instructions for the common DOE forms. Only those required per your FOA must be completed.

DOE applications typically include one of the following sets of forms:

- SF424 R&R, R&R Budget, Proj/Performance Site Locations, R&R Other Proj Information (Subaward R&R Budget and Disclosure of Lobbying are optional)
- Application for Federal Assistance, SF424 Other Attachments, Project/Performance Site Locations (Disclosure of Lobbying is optional)

Please find instructions for each of these forms below.
• **Application For Federal Assistance (SF-424)** – Proposal data does not map to this form, only the Federal Agency and Funding Opportunity information will default on the form. All other information must be manually added to this form, following the guidelines in the FOA.
  o Supporting Documentation can be uploaded in the Application Information section, per the FOA. Documents will appear in alphabetical order.
  o The PI/AOR/Contact Person will not default on the workspace; However, your GCA will still be able to access and submit this application.

• **SF424 (R&R)** – Always refer to the FOA for specific instructions regarding the cover page. Some DOE FOA’s may have unique requirements for fields such as the Federal Identifier, Agency Routing ID, and Descriptive Title. If a white paper or pre-application has been submitted, you may be required to identify its assigned number.

• **R&R Budget/R&R Subaward Budget**: The R&R budget will map from the proposal budget. Upload the budget justification directly to the SF424. For detailed steps on adding a subaward, refer to the Add Subawards to the SF424 section.

• **SF424 Other Attachments**: Upload a file to the Mandatory Other Attachment Field. Additional “Other Attachments” can be uploaded as needed.
  o The drag & drop functionality can be used on this form to upload attachments by simply dragging them from your computer Documents onto the form. Documents must be saved with the proper name before drag & dropping. You can also select “Upload” and “Choose a File” to search for a file. The title (file name) can be updated within the Title field.
  o Always attach the document in the format specified by the FOA. Any documents that are not as attached in PDF format will create a validation warning within the SF424 application SmartForm or when running the Validate SF424 activity. This warning is not a hard-stop and can be ignored if it conflicts with the FOA instructions.
  o If you run the SF424 application validation prior to updating the Other Attachments form, you will receive a validation error saying that the form is required. The error will resolve once a document is uploaded and the page is saved.

• **Project/Performance Site Location(s) (R&R) Form**: The Trustees of Princeton and subaward locations will map automatically. If needed, add additional performance site locations. Ensure you include an Organization Name as otherwise a validation error will occur (see the S2S Known Issues and Quirks Section for more details).

• **R&R Other Project Information**: Human subjects, animal, and embryonic stem cell information will map from the funding proposal. Answer all other questions manually and upload documents requested per the FOA.
  o The Project Abstract is a required field on this form, however the FOA may request the abstract is added to a different form (such as the Other Attachments form). In this case, a “dummy” or placeholder document should be uploaded to the R&R Other Project Information form to satisfy the upload requirement. It may state where the Project Abstract is uploaded per the FOA.

• **SF424 Disclosure of Lobbying Activities – SFLLL**: This form is typically optional for DOE proposals and should only be submitted if applicable.
  o The form will appear blank. No information will default, so this form must be completed manually.
  o Maximum of 10 Individuals Performing Services can be listed.
Validations do not confirm that information provided on this form matches the overall proposal, but it will confirm that all required fields have been completed.

Please note that there is also a field for uploading the SFLLL Disclosure Of Lobbying activities on the SF424 R&R Cover Page. If the form has already been completed outside of the system or if additional Explanatory Documentation should be provided, it may alternatively be uploaded on the R&R Cover Page.

10 USDA applications

As of Fall 2023, only one USDA proposal was submitted via s2s. The NIFA Supplemental Form and AFRI Project Type form have to be manually completed in the SF424 module. Always refer to the FOA to ensure all unique requirements are met.

11 Submit NASA applications through NSPIRES

NASA prefers applications to be submitted via NSPIRES and not via s2s, so we are no longer submitting applications via s2s.

12 Princeton ERA S2S Known Issues + Quirks

This section outlines known S2S issues and quirks, as well as their solution or workaround. If you encounter any issues not included on this list, please reach out to erasupport@princeton.edu.

12.1 Manually Completed Forms

- Funding proposal and budget information does not map to every SF424 form. Some forms need to be completed manually within the Princeton ERA system, including basic institutional and proposal information.
  - Examples Include: Application for Federal Assistance (SF-424), Budget Information for Non-Construction Forms

12.2 Fabricated Equipment Budgeting

- For fabricated equipment projects using the R&R budget form you may be required to budget as “Equipment.” However, these funds should be tracked internally as Materials and Supplies. Please budget them as a separate ERA budget with the Materials and Supplies category and update manually to Equipment on the R&R budget as needed. At award setup time, please work with your Award Specialist to ensure the PS project budget is set up appropriately.

12.3 Required Fields Missing Asterisk

- Within the SF424 application, there are several places where fields are required but an asterisk alerting you that they are required does not appear. Usually, this occurs when a field is conditionally required or if it’s part of agency validation versus Princeton ERA’s validation.
  - Running the “Validation” process within the SF424 forms or on the SF424 workspace will alert you of these missing fields.
  - Examples include:
    - Other Project Information – Project Abstract and Project Narrative
12.4 Other Project Information Form: international collaborators question

- If the R&R Other Project Information form question 6 "Does this project involve activities outside the United States or partnership with international collaborators?" has been answered, and the Create-Update SF424 activity is executed again with the Other Project Information form checked, the previous answer will be removed and the answer will be blanked out. You will have to answer the question again.

12.5 Funding Opportunity Announcement SmartForm error

- If the Funding Opportunity Announcement SmartForm page displays a message that the "Some of the required forms are not supported. Submission would not occur electronically" but all required forms and any optional forms you want to include display as "yes" in the "supported" column, return to the Submission Information SmartForm and click on the "Refresh Forms Support" button. Then navigate back to this SmartForm page and the error message should be cleared. If the error message is not cleared, contact erasupport@princeton.edu.

12.6 R&R Subaward Budget form: expired expiration date

- Note: The subaward file downloaded from the SF424 workspace has an expired OMB date, but this date is cosmetic. After the subaward file is completed and uploaded to the FP budget then synced to the SF424 via "create/update SF424" activity, the expiration date on the PDF generated in the “Generate PDF Version” activity on the SF424 workspace has an expiration date in the future.

12.7 Budget years that cross from 62% to 64% OH and the downstream impact

- There are many places where budget dollars are displayed in the Huron system and the SF424. For this discussion, the focus is on these three areas:
  - The Funding Proposal (FP) budget amount (displayed on the FP workspace).
  - The requested amount on the SF424 Cover Page (automatically mapped by Huron from the FP budget amount).
The OH amounts and total amounts on the SF424 yearly budgets and on the SF424 cumulative budget (automatically filled in by Huron).

- These three cumulative amounts do not match when there is a budget year that crosses from 62 to 64%.
  - Specifically, the OH amount in the budget year that crosses from 62 to 64% will be slightly different than the OH amount in the FP budget mainly due to rounding and ratios; therefore the grand total for that budget period (and therefore the cumulative budget amount) will be slightly different than the grand total for the FP budget.
  - That means the SF424 Cover page amount (which maps from the FP budget amount) will be different than the SF424 cumulative amount. In testing, I have seen this amount range from a few dollars to $25.

- There are three options. I have tested all of these options and they all work in the NIH Test Commons environment without warnings or errors. **ORPA recommends using option 2 and if you want to go the extra mile, use option 3. Use option 1 at your own risk.**
  - **Option 1:** Leave the SF424 application as-is. The SF424 Cover Page amount matches the FP budget amount, but the SF424 cumulative budget page will be a different amount in the SF424 application. The risk is the agency may return it or question it because the cover page amounts and cumulative amounts within the SF424 application do not match.
  - **Option 2:** Change the Cover Page amount to match the cumulative budget page amount; that way the amounts match within the SF424 application. The FP amount will be different.
  - **Option 3:** Use the “62%+64% FP vs SF424” tab (the second tab) of the “Blended 62% and 64% OH Rate Tool” spreadsheet in the “Tools” section of the Princeton ERA home page to update the OH rows for the budget year that crosses OH rates to match the Huron FP budget (fill in cells B2, B3, and B4, then use the values in cells D14, E14, D15 and E15 in the SF424 IDC section of the budget year that crosses OH years; these values should match the FP OH values or be very close). Doing so will in turn update the cumulative budget page. Then the SF424 cumulative budget amount will match the SF424 Cover Page amount which will match the FP workspace amount.